

C (Rhodesian) Squadron
22 Special Air Service
Regiment

Combat Manual



This edition Copyright © 2020 by C.A. Brown

All rights reserved. This book or any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of the publisher except for the use of brief quotations in a book review.

Printed in the United States of America

First Printing, 2020

ISBN: 9798610200842

The Rhodesian SAS Combat Manual

Table of Contents

Standard Security Terminology and Abbreviations	1
Communication	3
Antennae	5
Communications Brevity Codes	7
Rural Operations	11
Tracking	12
Patrol Bases	17
Patrolling	20
Encounter Actions	24
Suggested Layout of a Patrol Base	27
Poaching Procedure: Friendly Forces	28
Aide Memoire for Patrol Orders	29
Debriefing Pro Forma for Patrols	31
Tracker Team and Patrol Formations	32
Notes	34
Deliberate Attack on a Terrorist Camp	35
Contact/Incident Report Message	38
Principles of Laying Booby Traps	39
Booby Trap Pro Forma	40
The Ambushing of Insurgents	41
Area Ambush	47
Limited Ambush	47
Ambush Orders - Aide Memoire	48
Movement by Road	49
Land/Air Operations.....	54
Definitions	63
Air Force Roles and Capabilities.....	64
Requirement for and Marking of Drop Zone.....	65
Helicopter Operations.....	69
Close Air Support (COIN Operations).....	84
Standard Procedure for Carrying Out Becker Homings	89
First Aid.....	90
Artificial Respiration (Holger Nielson).....	93
Artificial Respiration (Mouth to Mouth).....	93
Health and Efficiency in Hot Climates.....	94
Treatment of Water.....	97
Distillation and Collection of Water in Arid Areas by means of a Plastic Sheet	99

The Rhodesian SAS Combat Manual

STANDARD SECURITY TERMINOLOGY AND ABBREVIATIONS

1. Civil Disobedience. A campaign with political motives, designed to disobey laws in order to exert pressure on the authorities.
2. Civil Power. The Civil Administration of the country including the Police.
3. Contact. Any form of encounter between the Security Forces and terrorists other than a sighting.
4. Counter Insurgency (COIN). All measures both Civil and Military taken to counter the various stages of a Revolutionary War.
5. Counter Insurgency Operations (COIN Ops). Action taken by the Security Forces which is directed against armed terrorists or terrorists suspected of being armed.
6. Incident. A terrorist act resulting in a criminal offence being committed or an interference with the rights of others.
7. Infiltration. The entry into the country of any person for subversive purposes.
8. Internal Security Operations (ISOPS). Operations conducted by the Army and/or Air Force in support of the Police against dissident factions who have not resorted to the use of armed force.
9. Intimidator. A person who by inspiring fear tries to impose his will on others.
10. Joint Operations (Joint Ops). Operations in which more than one element of the Security Forces are involved.
11. Joint Operations Centre (JOC). A joint agency set up by the Security Forces on the authority of Government for the conduct of operations when no single service is solely responsible.
12. Military Assistance to the Civil Power. The provision of units or members of the Defense Forces to assist the Civil Power in the maintenance of services essential to the life of the Community.
13. National Defense. Steps taken by the country to defend itself against military aggression by other countries.
14. Offensive Weapons. Offensive weapons include any article made or adapted or capable of adaptation for use in causing injury to the person or intended for such use.
15. Passive Resistance. An act or acts or a non-violent nature carried out willfully to defy the authorities.
16. Psychological Operations (PsyOps). The planned use of propaganda and other measures, designed to influence the opinions, emotions, attitudes and behaviour of enemy, neutral or friendly groups in support of current policy and aims, or of a military plan.
17. Revolutionary Warfare. The process which includes the use of political, economic and military measures that militant dissidents employ to weaken and overthrow the existing Government.
18. Saboteur. A supporter of a dissident faction who damages property for political purposes.
19. Security Forces (SF). The Police, the Army and the Air Force including any part-time or reserve forces.
20. Terrorist (Ter). A supporter of a dissident faction who is trained for or resorts to organised violence for political ends. If he willingly surrenders himself at a time when he could otherwise have made good his escape without difficulty, he is referred to as a surrendered terrorist (Ster). Any other terrorist who falls into our hands is a captured terrorist (Cter).
21. Terrorist Camp (Ter Camp). A place within the country, temporarily occupied by terrorists from which operations are conducted and where

The Rhodesian SAS Combat Manual

training may take place.

22. Terrorist Hide (Ter Hide). A place where terrorists may temporarily conceal themselves.

23. Terrorist Holding Centre (Ter Holding Centre). An establishment, located outside the country, where provision is made for the accomodation, indoctrination and training of terrorists.

COMMUNICATION

Section 1 - GENERAL

1. The exercise of command is dependant upon good communications so that a commander at any level may:

- a. Control and administer his force
- b. receive orders and information
- c. Cooperate with air and flanking formations

General Principles

2. The following general principles affecting the provision of communications will apply in any situation:

a. The higher headquarters provides and maintains communications to the next lower headquarters.

b. Internal and lateral communications are provided by the unit concerned.

3. Good communications are essential to the success of any operation. Sets and their operators must therefore be maintained at peak efficiency at all times.

4. The signal system designed for the command and control of all internal security and counter-insurgency operations is set out in the signal diagrams attached to Army HQ Signal directives issued periodically under classified cover and in Signal Circulars. These, however, cover only the communications of the Rhodesian Army. Those of the Air Force, Police and Civil Administration would have to be superimposed.

5. Whenever possible, radio communications are to be supplemented by line and signal despatch.

Army/Police Cooperation

6. In operations, communications between Army and Police at appropriate levels is essential. At JOC level this is achieved by physical adjacency. At other levels it may be accomplished by attaching liaison officers whose means of communication with their own headquarters may be military radio sets or normal civil line communications.

7. On active operations it might be possible for the Police to provide the Army with sets to effect intercommunication. Likewise, formations may hold a pool of VHF sets crystalised on Police frequencies. When this is not possible, the appropriate Army commander should endeavor to maintain the desired contact, if necessary by attaching a radio station and operator to the Police.

Army/Air Force Cooperation

8. Effective jointery will only result from the soldier fully appreciating the staff and signal procedures involved in the provision of air transport support and offensive air support. Ground-air communications are dealt with later in this chapter.

9. Note that when a joint HQ is established and the Air Force are not able to provide their own remote facilities between their sets and the Operations Room, the Army is to provide lines for this purpose.

Section 2 - COMMUNICATION IN THE INFANTRY BATTALION

10. Whatever the role of the battalion, the three means of providing communications are radio, line and orderlies. The operational requirements in Rhodesia will, particularly in rural operations, call for wide dispersion within the battalion. Radio will therefore be the main, and sometimes the only, means of communication.

11. As the requirement is for lightweight equipment, infantry radio sets are of low power and satisfactory communications will result only if a high standard of regimental signalling and first class maintenance are achieved, coupled with an understanding of the need for good siting and the correct use of antennae.

12. Line communications in the mobile role are likely to be largely impracticable but should be used wherever possible.

The Rhodesian SAS Combat Manual

13. Signal despatch service is to be provided down to battalion headquarters by the Rhodesian Corps of Signals. All possible use should be made of mounted orderlies to provide a similar service within the battalion.

Radio Communications

14. Organisation. The normal battalion radio layout comprises the battalion command net, the company/commando command net and the mortar platoon net. All company level rear links sets are normally grouped in one net. In the following circumstances, the net may be split:

a. When both high-frequency (HF) and very high frequency (VHF) sets are in use.

b. When a company is employed in an independent role.

15. Unit Stations Radio. The following stations are in use by infantry units of the Army:

a. HF - A10, A13, 19, TR 28

b. VHF - A39, A60 (both 6 and 12 channel)

16. A number of stations radio are held in pool at COSD/OSD to replace those which have been backloaded as unserviceable.

Section 3 - BEST RESULTS FROM STATIONS RADIO

High Frequency Sets

17a. Ground Wave. For high-frequency communications ground wave working with vertical antennae should, in general, be employed wherever possible for the following reasons:

1. Rod antennae are light, easily carried and the only means of working radio sets on the move.

2. Ground waves give steady signals and are normally free from severe fading but suffer from interference at night.

3. While ranges obtained are generally adequate, they are sufficiently localised to minimise interference with other nets.

b. Sky Wave. The distances involved in Rhodesia often preclude the use of ground wave working with rod antennae, and a horizontal wire antenna should be erected when rod antennae give unsatisfactory results. If a wire antenna is to be used, all stations on the net should change to this type of antenna.

c. Dipole antennae of local manufacture are now available (G5RV). This type of high-angle radiation antenna should be used in preference to the general purpose Aerial 100 ft No. 5. Where possible, however, correctly cut half-wave dipole antennae should be used.

d. The user Handbook or precis should be consulted to determine the type of aerial designed to be connected to the station radio.

Very High Frequency Sets

18a. Very high-frequency sets radiate most of their energy in the form of waves which are attenuated or weakened, not by the surface over which they pass, but by the buildings, trees, etc. through which they pass. If sets are sited so that the waves travel through space for most of their journey, little attenuation will occur. It is quite possible to work an A60 set over distances of up to 50 miles, if a line of sight path can be provided. However, the antennae supplied with VHF sets permit only limited ranges under ordinary circumstances.

b. The range of VHF sets can be greatly improved by the use of an elevated half-wave antenna, with a "ground plane reflector". These elevated ground plane antennae are supplied as part of the station. With the P80s, a mast is provided to achieve elevation. With the A60, only a stubmast is provided and elevation must be achieved by indigenous means (poles, trees, etc.).

Siting

19a. VHF. The importance of good siting cannot be over emphasized. The physical height of the antenna above the level of the surroundings is of paramount importance. Good signals cannot be expected when working inside woods or forests. Radio sets should, whenever possible, be sited to avoid intervening buildings, trees and features. If you cannot communicate, a move of a few yards often does the trick. Paradoxically, VHF is more effective than HF in built up areas because of the "bounce" effect of the rigid radio waves.

The Rhodesian SAS Combat Manual

ANTENNAE

Arithmetic

1. Basic calculation for $\frac{1}{4}$ wavelength ($\frac{1}{4}$ WL) =

$$\frac{234 \text{ (ft)}}{\text{frequency Mc/s}}$$

viz $\frac{1}{4}$ WL for 3600 Kc/s (Note: Mc/s = Kc/s/1000)

$$\frac{234}{3.6} = 65 \text{ feet}$$

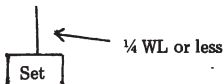
Siting

2. Do use highest ground available, on forward slope if possible.
3. Do avoid power lines, large metal buildings and roofs.
4. Do earth the set.
5. Do not let antennae touch trees, canopies, camouflage nets or metal objects.
6. Do not coil the spare antenna wire around the antenna base.
7. Vary the antenna height and move the antenna site if you do not establish communication.
8. If there is continuous static, check any electrical machines and vehicles by switching off in turn.
9. Ground wave working - if not through, try lowest frequency and increase vertical height.

HF Antennae

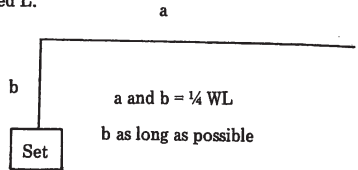
10. Groundwave

- a. Vertical



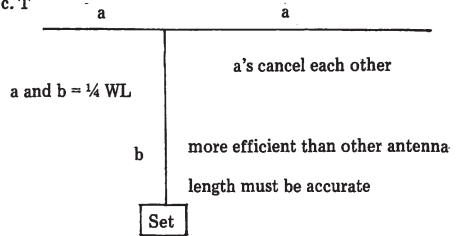
Height difficult

- b. Inverted L.



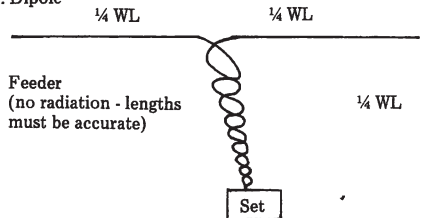
Interference from a with b

- c. T

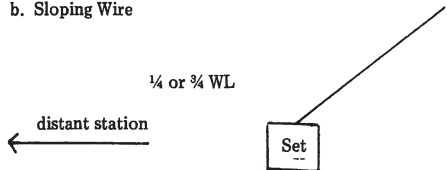


11. Skywave. (Vary antenna height and direction to overcome skip distance.)

- a. Dipole



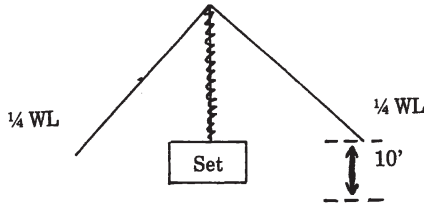
- b. Sloping Wire



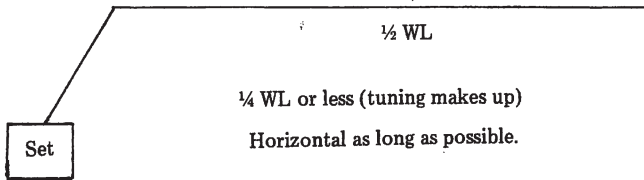
The Rhodesian SAS Combat Manual

c. Inverted Dipole.

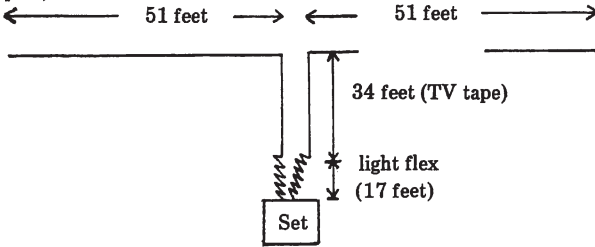
not less than 90 degrees



d. Wavelength

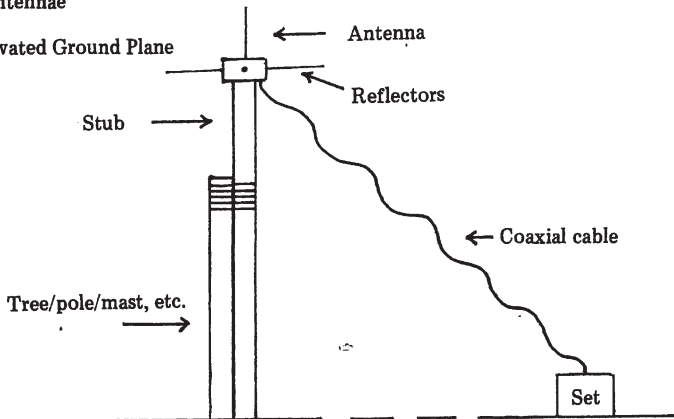


e. G5RV (Dipole)



VHF Antennae

12. Elevated Ground Plane



The Rhodesian SAS Combat Manual

Communications Brevity Codes

1. The codes are to be used for returns and demands.
2. Use only code letters and quantity figures, e.g. SA 200 (200 African fresh rations).
3. Do not include descriptive phrases such as "Personnel Strengths, Weapons and Controlled Stores", etc.

Section 1: Ammunition and Explosives

Cartridges	Code
0.22" ball	AA
0.300" ball	AB
0.300" tracer	AC
0.303" ball Mark 7	AD
0.303" ball Mark 8Z	AE
0.380" tracer	AF
7.62mm ball	AG
7.62mm tracer	AH
7.62mm ballistite	AI
7.62mm intermediate	AJ
9mm ball	AK
9mm tracer	AL
Shotgun	AM
Illuminating 1"	AN
Signal 1" (specify colour)	AO
Illuminating 5/8"	AP
Signal 5/8" (specify colour)	AQ
1½" AR	AR
25 pr Normal	AS
25 pr Super	AT
Grenades	Code
36 (HE)	BA
80 (WP)	BB
92 (CS)	BC
962 (HE)	BD
970 (WP)	BE
32Z (HE/AT/AP)	BF
32Z (practice)	BG
28R (HE/AT)	BH
28R (practice)	BI
Illuminating	BJ
Coloured smoke (specify colour)	BK
FUM 59	BL
Flares	Code
Trip wire	BQ

Flares

Illuminating	BR
Icarus Rockets	BS
Rockets	Code
3.5"	BT
Mines	Code
TMN 46	BU
personnel	BV
tank	BW
claymore	BX
Mortar	Code
2" illuminating	DA
60mm HE	DB
60mm Smoke	DC
60mm Illuminating	DD
60mm Coloured HE	DE
60mm primary cartridge	DF
81mm HE	DG
81mm Smoke	DH
81mm Illuminating	DI
81mm Coloured HE	DJ
81mm primary cartridge	DK
Shells	Code
25 pr HE	DL
25 pr Smoke	DM
25 pr AP	DN
90mm HEAT	DO
90mm HE	DP
90mm Practice	DQ
Explosives	Code
Detonators 6D	DR
Detonators Electric No. 6	DS
Fuse Safety	DT
Fuse Instantaneous	DU
Fuse Cordtex	DV
Fuse Electric F103	DW
Igniters SF percussion	DX
Igniters SF electric	DY
Igniters SF friction	DZ
Switches No. 4 pull	HA
Switches No. 5 pressure	HB
Switches No. 6 release	HC
Charges demolition No. 1	HD
Explosives plastic	HE

The Rhodesian SAS Combat Manual

Explosives	Code	Web Equipment	Code
Dynamite (kilos)	HF	44 Pattern	
Gelignite (kilos)	HG	Attachments brace	FA
Gunpowder (kilos)	HH	Belts waist	FB
Slabs CE/TNT	HI	Braces	FC
Primer demolition CE	HJ	Bottles	FD
Tubes fuze sealing	HK	Carriers water bottle	FE
Matches fuze	HL	Haversack	FF
Clips junction	HM	Machettes	FG
Compound cap scaling	HN	Machettes sheath	FH
Snouts switch cap	HO	Packs	FI
Bangalore torpedoes	HP	Pouches basic left	FJ
		Pouches basic right	FK
Personal Clothing and Equipment	Code	Straps shoulder left	FL
		Straps shoulder right	FM
Blankets lightweight	CA		
Blankets GS	CB	69 Pattern	
Boots combat	CC	Attachment yoke WE	FN
Boots hockey	CD	Belt waist	FO
Boots super pros	CE	Bottles water	FP
Caps combat	CF	Carriers water bottle	FQ
Cover waterproof	CG	Mat pack cover	FR
Face veils	CH	Pouches kidney left	FS
Jackets combat	CI	Pouches kidney right	FT
Jerseys green	CJ	Pouches magazine	FU
Laces boots pairs	CK	Yoke	FV
Laces hockey boots pairs	CL		
Palliasse KD	CM	Medical	Code
Palliasse nylon	CN		
Raincoat lightweight	CO	Aspirin	MA
Shirts camouflaged (H/W or L/W)	CP	Bandages ½"/1"/2" (state size)	MB
Shorts PT	CQ	Codeine	MC
Socks worsted	CR	Dressings shell	MD
Shelters lightweight/pouches	CS	Dressings field	ME
Sleeping bags	CT	Elastoplast	MF
Towels hand	CU	Gentian violet	MG
Trousers combat	CV	Iodine	MH
Underpants (cotton)	CW	J Packs complete	MI
		Laxative	MJ
Engineer Plant	Code	Lint	MK
		Morphine	ML
Boat patrol	EA	Penicillin ointment	MM
Bulldozer D4D	EB	Rolls cotton wool	MN
Compressor	EC	Rolls gauze	MO
Concrete mixer	ED	Snake bite sets	MP
Dumper	EE	Snake bite serum	MQ
Grader Cat 12	EF	Thermometer	MR
Generating Plant (specify KVA)	EG	Tinefax	MS
Loader front end	EH	Tablets cough	MT
Tractor agricultural	EI	Tablets malaria	MU
Water point set (specify gallons)	EJ	Tablets salt	MV
Welding plant	EK	Tablets vitamin	MW
		Tablets water purifying	MX

The Rhodesian SAS Combat Manual

Personnel Strengths	Code	Supplies and Expendables	Code
Regular officers	PA	Rations	
TF/Reserve Officers	PB	African fresh	SA
Air Force officers	PC	African TE	SB
Regular ES	PD	African 24 hour pack	SC
TF/Reserve ES	PE	European fresh	SD
Air Force ES	PF	European TE	SE
AS	PG	European Compo	SF
CAE	PH	European 24 hour pack	SG
Liaison officers (foreign)	PI	CAE fresh	SH
Liaison ES (foreign)	PJ	pack vegetarian	SI
Seconded officers (foreign)	PK	pack muslim	SJ
Seconded ES (foreign)	PL		
Signals Equipment	Code	Expendables	
Batteries		Bags sand	SK
B30 (16½v for SR A30)	RA	Batteries torch (type/number)	SL
B63 (13½v for SR A63)	RB	Cylinders gaz	SM
509 (6v for SR A60)	RC	Cylinders gas 20 lbs.	SN
Nicad (12v for TR 28)	RD	Cylinders gas 100 lbs.	SO
Nicad (24v for TR 48)	RE	Cream sunfilter	SP
12x90 AH	RF	Flannelette	SQ
		Foot powder	SR
Charging Equipment		Fuel, Oil, Lubricants	
Charging engine 800w	RG	Diesoline (litres)	ST
Charging engine 960w	RH	Boat oil (Delvac)	SU
Generating engine (Honda 4000)	RI	Engine oil (state grade)	SV
		Gearbox oil	SW
Stations Radio		Rifle oil	SX
A30	RJ	Petrol regular litres	SY
A49	RK	Petrol super litres	SZ
A60	RL		
A63	RM	Other Stores	
TR28S	RN	Insect repellant	JA
TR48	RO	Lemonade powder	JB
C14	RP	Soap (state type)	JC
C24	RQ	Forks table	JD
C24T	RR	Jerrycans paraffin	JE
C41	RS	Jerrycans petrol	JF
		Jerrycans water	JG
Associated Radio Equipment		Knives clasp	JH
FSK	RT	Knives table	JI
ATU (A55)	RU	Mess tins	JJ
MSU 15	RV	Nets mosquito	JK
Amplifier (500w)	RW	Spoons dessert	JL
Teleprinter	RX	Stands gas filling	JM
Miscellaneous		Vehicles	Code
Aerial signalling strips	RY	AFV	
Cable electric D10	RZ	Ferrets	VA
Hydrometer	TA	El and 60	VB
Telephone Land (J, L or F)	TB	El and 90	VC

The Rhodesian SAS Combat Manual

Cars	Code	Mortars	Code
Ambulances	VD	2"	WR
¼ ton 4x4 LWB	VE	3"	WS
¼ ton 4x4 station wagon	VF	60mm	WT
Motorcycles	VG	81mm	WU
Mine detonator	VH	81mm sights	WV
Recovery/low loader	VI		
		Miscellaneous	
Trailers		3.5" rocket launcher	LA
½ ton	VJ	Binoculars prismatic	LB
1 ton	VK	Compasses prismatic	LC
cooker	VL	Compasses recta	LD
petrol	VM	Compasses wrist	LE
water	VN	Mine detectors	LF
		Mine lifting stores	LG
Trucks		Projector 5/8" (mini flare)	LH
¾ ton to 1½ ton 4x4	VP	Rangefinder No. 12	LI
3-5 tons 4x2	VQ	Sight M198/1	LJ
3-5 tons 4x4	VR	Watches wrist	LK
Refrigerator	VS	Whistles dog	LL
Transporter 10 ton	VO		
		Welfare Stores	
Weapons and Controlled Stores	Code	Beer	GA
		Brushes shaving	GB
Pistols		Blades razor	GC
Pistol 0.380"	WA	Cigarettes (state brand)	GD
Pistol 9mm	WB	Envelopes	GE
Pistol 1" signal	WC	Fruit fresh	GF
Pistol 1½" signal	WD	Fruit tinned	GG
		Minerals	GH
Rifles		Pens	GI
7.62mm FN	WE	Pencils	GJ
7.62mm SLR	WF	Razors	GK
0.303" No. 4	WG	Toothpaste	GL
Shotgun No. 4 T	WH	Soap toilet	GM
		Soap shaving lather	GN
Submachineguns		Soap shaving brushless	GO
Sterling	WI	Hair shampoo	GP
FN	WJ	Writing pad	GQ
Machineguns			
LMG Bren 0.303"	WK		
LMG Bren 7.62mm	WL		
HB FN 7.62mm	WM		
MG 7.62mm (MAG)	WN		
MG Browning 0.300"	WO		
MG Browning 7.62mm	WP		
MMG Vickers	WQ		

RURAL OPERATIONS

Section 1 - INTRODUCTION

1. The tactics which are recommended in this chapter are designed to meet the general requirements for rural COIN Operations in Rhodesia. These tactics are given as a guide and leaders at all levels are responsible for making intelligent use of these and any other tactics or drills which will give success. Section and Platoon Battle Drills taught and used for Limited War are an integral part of COIN Operations and must be as thoroughly understood by all ranks as these actions recommended in this chapter for COIN Operations. Leaders and men must be practised and rehearsed in Limited War Section and Platoon Battle Drills and Encounter Actions as recommended in this chapter so that they reach a standard where they are able to carry out reflex and instinctive actions and adapt their training and common sense to the situation, circumstances and terrain as these prevail at each individual encounter. No two contacts with terrorists are ever the same except in one vital way: mens' lives are at stake.

2. The four main requirements for success are:

a. Encounter Actions. The absolute necessity for the adoption of the actions laid down in this chapter. Experience shows they ensure maximum success against terrorists in contacts or incidents and, equally as important, they save casualties.

b. Snap Shooting. The vital importance of accurate and quick shooting from all positions and all types of cover.

c. Offensive Action. The need for immediate offensive action, both in planning at all levels and also in tactical engagements.

d. Discipline. The necessity in operations of this nature of discipline and all that it stands for. Terrorists will avoid action with disciplined troops but they can expect a measure of success against troops whose discipline is poor.

3. Types of Operation. Rural operations are

likely to take one or more of the following forms:

a. Support of the Civil Administration and Police in the maintenance of law and order. This might include prevention of intimidation, arrests of suspects, cordons and searches, roadblocks, border control and the guarding of key points.

b. Active patrolling to break a terrorist hold on rural areas. This assists the civil authorities to persuade inhabitants to return to their villages and normal life and to reject terrorist influence.

c. Full scale COIN operations to eliminate terrorist gangs.

Section 2 - PLATOON/TROOP ORGANISATION

4. No standard platoon/troop organisation is given; the organisation adopted depends on the tasks to be carried out and the number of troops available. Other matters affecting the organisation are terrain, terrorist characteristics and, sometimes, the duration of the operation.

5. The normal platoon organisation is designed for operations in limited war. This organisation has been adopted to suit the characteristics of rural operations in Rhodesia.

6. Where possible, the platoon should be organised into a HQ and three sections each of three groups. Troops in commando or special units normally break down into half troops.

7. The platoon HQ should consist of:
Platoon Commander
Platoon Sergeant
Orderly
Signaller(s)

8. The section should consist of:

a. A reconnaissance or contact group consisting of the section commander and two scouts.

b. A support group consisting of a group commander (section 2IC) and machine gunner.

The Rhodesian SAS Combat Manual

c. A rifle group consisting of a group commander and two riflemen.

9. In addition, certain specialties such as medical orderlies, police, guides, trackers, etc. may also be attached.

10. When the strength of the platoon is low, sections can be reduced to two, or the groups in each section reduced to two by discarding the rifle group.

11. The section should, where possible, be organised into three groups because this form of organisation:

a. Simplifies the section commander's job of control.

b. Provides the grouping needed for effective minor tactics against terrorists.

c. Helps to train potential junior leaders who can take over a section if necessary.

d. Develops a group team spirit.

Section 3 - TRACKING

12. Trackers may not be necessary in an African unit or those units which have become proficient in bushcraft. Other units may have to have police, civilians or African soldiers attached to patrols for tracking duties.

13. As terrorists are likely to become masters of bushcraft, they will probably rely on superior ability to "out see" and "out walk" security forces. Their ability to track and read tracks naturally will make them more proficient in hiding their own. This will necessitate members of the Security Forces being expert trackers themselves, or being able to work with and understand loyal African trackers.

14. Using Sters. So far as ex-terrorist trackers are concerned, the fact that they have surrendered and led security forces to a good kill does not indicate that they have changed their loyalty. The mere fact that they are prepared to cooperate with the Security Forces against their fellow terrorists demonstrates their lack of loyalty. They should be used whenever appropriate. They should be continually reminded in one way or another that they are exceptionally fortunate not to have been

shot before their surrender, that they are on probation and have a score which can only be settled by continuous and satisfactory service. Extreme care should be taken to avoid Sters leading our patrols into ambushes.

Tracker Combat Teams

16. General. The ideal Tracker Combat Team consists of four men, all of whom are expert trackers. This four man team should not be split down unless it is of vital operational necessity to do so.

17. Role.

a. Locating spoor.

b. Tracking and destroying small groups of terrorists.

c. To provide a tracker group as part of a larger follow-up group.

d. To locate terrorists who are still undetected.

18. Organisation. A Tracker Combat Team consists of the following combinations:

a. The tracker on the spoor.

b. Two flank trackers.

c. The tracker control.

19. Tracker Combat Team Capabilities.

a. The ability to locate spoor quickly should it deviate.

b. The ability to search for and locate spoor quickly when it is temporarily lost.

c. The ability to rotate duties within itself so as not to tire the person actually tracking.

d. To be self contained in tracking, observation and protection.

20. Individual Tracker Tasks.

a. The tracker follows the spoor.

b. The flank trackers perform the following tasks:

The Rhodesian SAS Combat Manual

(1) The main task of the flank trackers is to provide protection for the tracker on the spoor.

(2) They pick up the spoor if it veers to the left or the right.

(3) They carry out a circular cast if the spoor is lost.

(4) When advancing, they swing towards one another and out again to the flank position in an effort to locate the spoor ahead of the tracker and speed up tracking. Great care is exercised to ensure the spoor is not obliterated or disturbed by the flank trackers.

c. Tracker's Control carries out the following functions:

(1) He controls the teams activities by the use of signs and signals.

(2) He is additional tracker protection.

(3) He reports progress to the commander of the follow-up troops.

(4) He is the eyes and ears of the tracker team.

(5) When the spoor is lost, he marks the last positive sign while the remainder of the team search the area for the spoor.

21. Action on Finding Tracks.

a. Unless it is possible to follow the spoor with either a civilian tracker or a Combat Tracker Team, anyone finding spoor should isolate the scene and keep that area free of security forces until the arrival of trackers. An immediate report should be made to higher headquarters giving the following information:

(1) Estimated number of terrorists.

(2) Age of spoor.

(3) Direction.

(4) Any other useful information such as location, terrain, etc.

b. It is absolutely essential that the spoor is not obliterated or disturbed by the discoverers. The spoor and the surrounding area must remain

untouched until the arrival of a tracker or tracker team. It is not possible to follow one preserved spoor when the remainder of the area has been trampled flat by security forces.

22. It frequently pays to back track when very fresh tracks are found, particularly early in the morning when they may lead to a camp.

23. Tracker Combat Team Formations. There are two essential formations used:

a. Open formation for fairly open country.

b. Single file for very thick bush.

(Both formations are shown in Annex E)

24. Tracker Combat Team Follow-Up Tactics. Annex E shows Tracker Combat Team formations. These are superimposed on to follow-up formations normally adopted by Rhodesian troops in operations. (See Appendices to Annex E).

a. Open Country.

(1) Flank trackers remain slightly ahead of the main tracker who is in visual contact.

(2) If the spoor veers off to the left or right, it should be picked up by either of the flank trackers. The flank tracker who picks up the spoor continues as main tracker on the spoor. The remainder of the team conform with the standard patrolling formation with the last main tracker filling in the vacant flank position.

(3) If the spoor is lost, flank trackers do a circular cast working towards one another in the hope of picking up the spoor again. By this method, a 360 degree circle is completed in the area where it was lost.

(4) While the flank trackers are carrying out the search as described above, the tracker who was on the spoor carries out a 360 degree search approximately 15 yards to his immediate front.

(5) Tracker control marks the last positive spoor and provides protection for the trackers.

(6) At this stage the team is particularly vulnerable and the team rely completely on the alert state of Tracker Control.

The Rhodesian SAS Combat Manual

b. Thick Country.

(1) The main tracker follows the spoor with Tracker Control within ten yards of him as protection man. Tracker Control does not attempt to follow the spoor as he observes and listens for the tracker team.

(2) If the spoor is temporarily lost, Tracker Control marks the last positive spoor and the flank trackers now in single file behind Tracker Control cast around in an enveloping 360 degree circle in an effort to find the spoor (See Annex E, Appx 1 and 5)

(3) The main tracker completes a 360 degree circle approximately 15 yards to his immediate front.

(4) Once the spoor has been relocated, the tracker who found the spoor then takes over as main tracker. The remainder of the team fall into an appropriate tracker formation.

25. Tracker Combat Team and Follow-up Troops Combinations.

a. It must be appreciated that all formations are subject to variations depending on the type of country and the appreciation of the commander of the patrol.

b. There are a number of formation permutations in current use in the Rhodesia Army (See Annex E and Appendices).

c. There is considerable variation in the Rhodesian bush between the summer and winter months, and these formations are adaptable to either open country or thick bush.

Use of Dogs

26. The only tracker dogs at present available to Security Forces in Rhodesia are those used by the Police. Both dogs and handlers are extremely well trained for Police requirements.

27. These dogs have been used in COIN Operations but have achieved only limited success. It is doubtful whether these dogs would be made available for general operations but the occasion may arise when a dog is again attached to a patrol for tracking purposes.

28. The dog will normally follow the freshest track, but he will, if "given the scent" from personal clothing or belongings, discriminate and follow the scent of that particular quarry.

29. It should be realised that dogs tire easily, and therefore they should only be used for tracking when visual tracking becomes very difficult or impossible. If the tracks become visible once more visual tracking should be resumed to conserve the dog's strength and concentration.

30. Apart from obvious factors which cause the quarry to leave a strong scent, e.g. blood, dirty body and clothes, sweat or panic, there are certain climatic factors which influence scenting conditions:

a. Favourable.

(1) Air and ground temperatures approximately the same.

(2) Dull, damp weather.

b. Adverse.

(1) Hot sun.

(2) Strong winds.

(3) Heavy rains.

(4) Tarmac roads, rock and other hard surfaces.

(5) Dust.

(6) Running water.

31. From this can be deduced the following facts regarding scenting conditions:

a. The dogs will track well at night, in the early mornings and late evenings.

b. The periods of the rainy season will be favourable for tracking except during heavy rain and immediately afterwards.

c. The bush should nearly always produce good conditions, but here the presence of game may cause confusion.

The Rhodesian SAS Combat Manual

d. The employment of tracker dogs in towns and villages is very rarely worthwhile.

e. Under the most favourable conditions, it will be quite feasible to follow tracks up to 12 hours old.

f. Under unfavourable conditions, there may be no scent at all even if the quarry is only a few minutes ahead.

32. Dogs should not be used as a last resort and once the decision is made to use a dog, the area must not be "fouled". Therefore, all unnecessary movement in the area by troops, police or civilians must be rigidly controlled until the dog has picked up the scent. Dogs may be transported by helicopters as the animals travel well and do not suffer any discomfort. The following points should be remembered:

a. The down draft from the helicopter can very easily destroy any scent. Hence, the helicopter should not fly low over a known, or suspected, trail.

b. When a dog is tracking, the presence of a helicopter flying nearby often distracts the animal and so the aircraft should be kept well away.

33. Use of Aircraft for Tracking. Light aircraft and/or helicopters can be of great assistance to patrols in tracking gangs of insurgents. It is essential that the insurgents are kept on the move by the ground forces as a stationary man, under even light cover, is difficult to spot from the air. Patrol leaders should also remember that helicopter noise can break security and indicate to the terrorists what the Security Forces are planning.

Section 4 - HINTS ON TRAILS AND TRACKING

34. General. It is extremely difficult to move silently and quickly in most parts of the Rhodesian bush and consequently this requires much practice and concentration.

35. There are many paths in the bush made by game during their nightly or seasonal movements. These animals avoid steep or slippery slopes and therefore game paths will normally provide easy going. Insurgents and our own patrols use these trails when quick, silent movement is required. Troops should exercise extreme caution when using these trails as Security Forces might well be ambushed.

36. There are two distinct types of spoor; ground spoor and aerial spoor. The ground sign is normally made by a boot or foot print and aerial spoor is in the form of trampled grass, broken bushes, broken cobwebs, etc.

37. Man. Barefoot prints are soft, rounded impressions formed by the heel, ball of the foot or toes. Women's tracks are generally smaller and usually have two characteristics; firstly, they tend to be pigeon-toed and, secondly, their toes are more splayed out than the males.

38. Animals. As most animals have cloven hooves, the impressions formed on the ground have sharp, clear cut edges.

Tracking

39. The following are signs that the experienced tracker seeks when following spoor:

a. Crushed and bent grass and vegetation.

b. Broken twigs and leaves.

c. Overturned leaves.

d. Mud displaced from streams.

e. Broken cobwebs.

f. The state of the dew on a trail.

g. Mud or scratches on stones and logs.

40. Running men. Points to observe are skid marks, depth of impression, running on balls of feet and toes, splayed out toes and badly damaged vegetation with resultant lack of concealment of the trail.

41. Loaded men. Short footsteps, deeper impressions than normal in soft ground, toes splayed out.

42. Judging the Age of Tracks.

a. Weather. The state of the weather - rain, wind, sunshine - should always be on one's mind as it is one of the most important points in deciding the age of a track.

b. Vegetation. The state and position of trodden vegetation; various grasses have different grades of

The Rhodesian SAS Combat Manual

resilience and only practice and experience can enable a tracker to use this factor to accurately judge the age of the spoor.

c. Impression in mud. Always note the state of dryness of a track in mud or soft ground. If the track is very fresh, water will not have run back into the depression made by a foot. The water will run back later and later still the mud pushed up around the depression and kicked forward by the foot leaving the ground will begin to dry.

d. Obliteration by rain or guti. By remembering when it last rained, more accurate judgment of the age of tracks is possible. If the tracks are pock-marked, they were obviously made before the rain and, if not pock-marked, they were made after the rain. Similarly, by looking to see if the tracks have been pock-marked by guti dripping from trees, the age can be established.

e. Bent Grass or Leaves. An indication of the age of a track may be gained by the state of dryness of the bent grass is still green but after a few days turns a brown colour. Again, the amount of sunshine and rain during the last few days should be taken into account.

f. Game Tracks. Remember that most animals lie up during the day and move about at night. Therefore, if human prints on main forest game trails have at least a double set of animal spoor superimposed and these spoor show that the game has moved in both directions, any human prints are probably at least one night old. If the animal spoor show that game has moved in one direction only, then the human prints were probably made during the night after the game had moved down to water but before the game moved back.

43. Information regarding insurgents' methods of concealing tracks and camps should also be sought.

44. Factors affecting Tracking. There are certain factors which affect tracking:

a. Whether the ground is hard or soft, stony or muddy.

b. The type of country - Savannah or Mopani forest.

c. The weather - things lack depth in overcast weather.

d. The position of the sun relative to the direction of travel. The most suitable position is when one has to track towards the sun.

e. The footwear of the human quarry. A distinct boot pattern is obviously easier to follow than a plain soled spoor.

f. The extent to which other similar tracks may confuse and possibly blur the spoor.

g. Concentration and the effects of weariness.

45. Things the tracker must look for:

a. Footprints and impressions of footwear; the rhythm of the spoor or length of stride of the quarry. This is a guide to where the next footprint can be found.

b. Trampled grass.

c. Disturbed stones, sticks or soil. Marks in the soil where indirect pressure may have left no impression.

d. Leaves - turned, crushed, kicked or pulled off trees. Branches and twigs bent or broken. Vegetation pushed aside and the reflection of light from grass or leaves displaced at an angle. The colour of bent and broken vegetation, scratched or chipped bark.

e. Discarded wrapping and masticated vegetation.

f. Cobwebs broken or wiped off onto a nearby tree or bush.

g. Urine and excrement, frequently indicated by house flies, mopani bees, yellow butterflies and, during the rains, dung beetles.

h. Snares and traps, robbed bees nests and smoke.

j. The state of dew on the spoor.

k. Mud displaced from streams or mud on stones and logs.

l. Squashed animal or insect life and whether it has been attacked by ants.

46. Bush Danger Signs.

a. The Grey Loerie when disturbed will utter a

The Rhodesian SAS Combat Manual

loud and drawn out "g-way" call, and often follows the intruder, thus alarming the quarry or warning the tracker.

b. The honey guide bird and ox-pecker both have the same "give away" effect on both quarry and tracker.

Conclusion

47. A tracker has many things to consider while tracking. He must possess certain qualities such as above average eyesight, memory, intelligence, fitness, anticipation and understanding of nature. Patience, persistence, acute observation and natural instinct are the basis of good tracking. There are times when pure instinct alone will draw a tracker in the correct direction. All units should ensure that training in Aggressive Bushcraft is maintained at the highest possible standard.

Section 5 - PATROL BASES

48. General. It is seldom that a rural patrol can be finished in one day. Basing up, by day or night, is therefore a part of most patrols. Provided there is a drill for establishing and breaking a base, there should be no confusion or wasted time. This drill is possibly the one which is used most frequently in COIN Operations.

49. The bases may be patrol, platoon or company bases, and the general principles to be followed are the same. Irrespective of their size, a base is a secret camp from which patrols operate. It may be in existence for one night or for months, depending on the size and tasks of the force occupying it. It is difficult to keep the presence of a base secret for any length of time due to normal base noises such as radios and vehicles. It must, however, be secure against attack at all times.

Siting a Base

50. Well trained and hardened troops can make a base practically anywhere but some places are obviously better than others. The following are the main factors involved in siting a base:

- a. Availability of water.
- b. Security.
- c. Radio communications.

d. Resupply.

e. Hardstanding.

f. The base must be so sited that the operational task may be carried out efficiently.

g. Avoidance of game tracks.

51. Availability of Water. The base should be sited near water. Excessive movement from the base to the water point may well prejudice the security of the base unless there is an extremely well covered route. The decision as to whether to site the base close to water or some distance away will be influenced by the local situation.

Insurgents, for example, frequently site their bases a mile or more away from water in order to obtain maximum security.

52. Security

a. Deception. This should always be planned. Some suggestions are as follows:

(1) The hours of darkness should, when possible, be used to cover the approach march.

(2) It may sometimes be necessary to detain local inhabitants who have blundered into patrols during the approach march.

(3) In the approach march, centres of population should be avoided.

(4) False airdrops can be made to give the impression that troops are present in an area where, in fact, there are none.

(5) Do not use the obvious place for a base.

(6) Not more than one track should lead into a base. This track should be well camouflaged and guarded. A suggested manner in which to lay a deceptive track is to allow it to pass the base at an angle. This would allow the occupants of a base to hear persons approaching and so act as a warning.
(See Annex 'A')

b. Silence. The base must be established silently, and the use of machines, entrenchment tools, etc., must be kept to a minimum.

The Rhodesian SAS Combat Manual

c. Fires. Small holes should be dug in which to light fires. They should only be large enough to allow for two mess tins to be used at a time. The use of Tommy Cookers should be limited as they can be smelt for some considerable distance. Fires should be smokeless and it is desirable that they be extinguished before last light.

d. Dress and Equipment. Members of a patrol base should not be allowed to leave items of dress and equipment lying around, nor should they be allowed to lounge around in a state of undress.

A white towel or vest, or even the whiteness of a person's body can be seen from a considerable distance and prejudice the security of the base. All items of clothing and equipment should be coloured jungle green, khaki or black. White articles must be covered or splashed with mud.

e. Stand-To. It is essential in operations against insurgents for all men to be alert when initially basing up and just before first and last light. During these periods the commander satisfies himself that all precautions have been taken to ensure the security of the base. (See paragraph h. below)

Additional reasons for this stand-to procedure are:

(1) It enables every man to check that he knows exactly the disposition of his neighbors to the flanks, front and rear. This is the best safeguard against confusion should the base be attacked.

(2) It ensures that every man rises in the morning, retires for the night and goes on sentry duty properly equipped and with all items of arms, ammunition and equipment ready at hand.

(3) Evening stand-to may be conveniently used by the commander to check arms, equipment and stores.

(4) Sub-unit commanders are to detail day and night sentries and can check at stand-to that every man knows his tour of duty and his orders.

(5) Commanders are to check that each man knows what to do in case of alarm, and knows what troops, if any, are outside the patrol base and their expected time of return.

(6) It enables commanders to ensure the strict observance of medical precautions and to inspect weapons.

f. Sentries by day.

(1) Sentries must be posted, particularly to observe tracks leading past or into the base.

(2) Their positioning should be such that a timely warning may be given to the base on the approach of any person(s).

(3) Sentries should also be posted near latrines and water points when in use.

g. Sentries by night.

(1) Double sentries should always be posted if the patrol has sufficient men.

(2) Sentries must have some means of waking their commander silently.

(3) Timings for sentry duty for double sentries should overlap, e.g. one man on from 0100 to 0300 hours and his colleague on from 0200 to 0400 hours. If there are only single sentry arrangements, the sentry coming on duty should arrive 30 minutes early to adjust night vision and get used to salient features in the vicinity of the base.

h. Patrols.

(1) Security Patrols. A security patrol must be sent out to ensure that the area surrounding the selected site for a base camp is clear of terrorists. This patrol should go out each day at first light and last light. Stand-to should be maintained until the patrol returns to report the area clear or otherwise. This patrol is vital to avoid any chance of a surprise attack by terrorists and could pick up some spoor laid during the night.

(2) Normal Patrols. Patrolling must be carefully controlled by the commander so that tracks in the area of the base are kept to a minimum.

j. Carrying of Weapons. Every man must be armed at all times and men must never move about singly. The reason is obvious but only strict discipline will ensure that this rule is observed.

k. Alarm Scheme.

(1) When firing starts or the alarm signal is given, every man moves silently to his stand-to position. There must be no further movement in the base until stand-down is given. This system ensures that

The Rhodesian SAS Combat Manual

anyone moving during the period of the alarm must be an insurgent and can be dealt with accordingly.

(2) There should be no firing at night until the insurgents are a certain target.

1. Leaving a base. When leaving a base, every effort must be made to obliterate any signs of occupation and, in particular, any tell-tale marks of the time of occupation. Any shelters should be destroyed before the base is vacated.

53. Radio Communications. A base must have good facilities for radio communications. Although it would be preferable for good communications to site a base on high ground, this will not always be possible from a tactical point of view, and therefore the commander of a base must compromise in the selection of his base site.

54. Resupply. When operating in remote areas, the only method of resupply may be the air. Air supply, with the incumbent selection of a dropping zone, must not be allowed to affect the tactical siting of the base. Therefore, a long carry of some miles is preferable to forfeiting security. An alternative is to vacate the base and move on after taking an air drop.

55. Hardstanding. The base must allow men to sleep in comfort. Do not select an area which is wet underfoot and do not expect to sleep comfortably on steep slopes. Flat and dry ground that drains quickly is the best.

56. The base must be so sited that the operational task may be carried out. No difficulty should be experienced by a patrol in leaving or returning to base in order to accomplish its aim.

57. Avoidance of game tracks. As these tracks are not only used by game, but may well be utilized by insurgents, a base should not be sited across or in the vicinity of such tracks. Should game use such a track and scent humans, they are likely to leave the track and create a new track, so giving an indication to insurgents that humans are in the vicinity.

Layout

58. Annex A shows a suggested layout for a platoon base. In establishing a base for one or two sections, the same principles would apply, the

commander in all cases positioning himself in the centre of the base.

Sequence of Establishing a Base.

59. A suggested sequence for the establishment of a base is as follows:

a. The patrol commander and escort will move to the area where he considers he will site his base.

b. When he has selected his sites, he calls forward the remainder of the patrol. The patrol coming forward is to exercise caution in using the track and route used by the patrol commander.

c. When the patrol arrives, the patrol commander indicates on the ground 12 o'clock and 6 o'clock positions for the base and details positions for each group.

d. Groups, under their commanders, move into their indicated positions according to a clock system, and make contact with the groups on their left and right.

e. The patrol commander orders stand-to and sends out local security patrols to ensure that the area within hearing distance is clear of stray Africans and insurgents. These patrols should circle the base about 400 yards out searching for spoor and listening for foreign sounds.

f. While the local security patrols are searching the area, the patrol commander quickly goes around making adjustments to group positions to ensure all round defence is established and the men are alert.

g. The patrol is to remain at Stand-to until the local security patrols return.

h. On the return of the local security patrols and before stand-down, the patrol commander holds an order group and orders are issued. The following points should be covered:

(1) Sentries, passwords, stand-to, stand-down and alarm scheme.

(2) Patrols, both base security and search patrols.

(3) Routine for the next day.

(4) Maintenance of weapons.

The Rhodesian SAS Combat Manual

(5) Water

(6) Cooking, fires and smoking.

(7) Latrines.

j. No matter how tired the men may be or what the situation, the sequence suggested above should be followed as closely as possible. Appropriate security arrangements listed in this section should also be taken for semi-permanent base camps.

Administration of a Base

60. If base administration is not of a high standard, patrolling from the base will deteriorate because living in it will be unpleasant and tiring. Some of the points which require attention are:

a. Latrines. These are normally outside the base and will be protected by the sentry layout.

b. Disposal of refuse. Refuse must be disposed of in such a manner that scavengers (e.g. baboons, jackals, hyenas, etc.) will not dig it up. It is suggested that a likely method of disposal is to dig the latrine pits deep enough to accommodate excreta and refuse. This will usually deter wild animals and scavengers from digging up the pits.

c. Tins. All tins should be punctured before burial so as to render them useless.

d. Water purification. The patrol commander is responsible for ensuring that all water is sterilized before use.

e. Cooking. Arrangements for cooking will depend on the situation and the instructions of the patrol commander. Experience has shown that cooking in pairs has many advantages.

f. Duties. Under normal conditions, when a patrol of platoon strength is committed for a long period, it has been found that two section patrols deployed and one in base is the most efficient method of rotating duties. The sections rotate on a daily basis with the one in base responsible for all guards, fatigues and as a reserve.

Conclusion

61. A patrol commander must appreciate not only the importance of establishing a base, but also of establishing an efficient one whether it be a

framework deployment base or a semi-permanent base. An efficient base is one in which:

a. The security arrangements are sound and known to all.

b. Duties are evenly distributed and rest is organised.

c. Strict hygiene rules and water discipline are laid down and observed.

d. A high all round standard of discipline and routine is established.

Section 6 - PATROLLING

General

62. A Common feature of rural operations is that, irrespective of whether an operation has been planned at brigade, or at platoon level, or whether it has been designed to:

a. Search an area of bush.

b. Disrupt insurgent food supplies.

c. Keep insurgents on the move.

d. Pursue a specific gang with the aid of trackers.

e. Sweep progressively a large area of bush with a large number of troops.

the troops taking part will almost invariably find themselves functioning in the role of a patrol which is out of visual contact with other troops and will have a local aim of contacting and eliminating terrorists.

63. The ability to carry out skilful patrolling, which will result in contacting and eliminating terrorists, is the prime requirement for all troops engaged in rural operations. In this respect therefore, commander at all levels should consider patrol planning carefully and base this on realistic appreciations whether the situation is simple or complex.

64. Leadership and Morale. Since patrolling is frequently done by patrols of approximately platoon and section strength, they will often be commanded by junior officers and NCOs. These junior leaders must be well trained and their

The Rhodesian SAS Combat Manual

leadership qualities developed to the full before they can command in the bush. Unless leadership is of the highest standard, the aim of any patrol will seldom be attained and the morale of the men will suffer accordingly.

Patrol Areas

65. Wherever possible, a patrol commander must be given the limit and boundaries of his patrol area so that he knows the exact area of his responsibility, thereby minimizing the risk of patrol clashes. These boundaries must, wherever possible, follow clear natural features, e.g. ridges, rivers, roads or vleis. If this is not possible, it is essential that all security forces in the area are aware that operations are taking place in the area and that some form of dress be agreed for recognition purposes.

66. It should be made clear to patrol commanders what latitude is allowed regarding boundaries in the event of his patrol encountering fresh insurgent tracks leading out of his area.

67. Wherever possible, the maximum freedom should be given to patrols to follow up unexpected encounters rather than risk losing the chance of an engagement. In practice it is almost impossible for a patrol in the bush to pinpoint its position sufficiently accurately to hand over to another unit. In any case, the delay which such a course would involve would almost certainly result in loss of contact with the insurgents.

68. If, at the start of any operation, it is possible that the patrol may have to cross the unit or sub-unit boundaries, clearance should be arranged before the patrol leaves base.

69. If, during an operation, the patrol must cross any unit or sub-unit boundaries, clearance will be obtained. The procedure to be followed for clearance is shown in Annex 'B' to this chapter.

70. The main problem when planning patrolling is the introduction of patrols into their operational areas without the loss of security. Every means of avoiding observation by civilians must be used, e.g. movement by night, the use of indirect routes and deception. Deception may include the use of civilian vehicles, water craft and trains. Security and deception are essential factors to consider when planning a patrol.

Briefing and Debriefing

71. Information. The following items must always be studied and passed on to a patrol commander before his patrol is sent out:

a. Topography. Full use should be made of maps, air photographs, air reconnaissance and local knowledge. A patrol "going map" should be kept up to date and information should be handed over to relief patrols and passed back to superior headquarters at regular intervals.

b. Insurgents. Information may be available from Special Branch briefs, surrendered insurgents, air reconnaissance both visual and photographic, captured documents and diaries. The past history of insurgent activities in the area should be studied.

c. Security Forces. Boundaries and movements of all security forces in the area should be considered.

d. Civilians. Movements and habits of civilians must be studied if movement by troops is to remain secure.

72. To obtain the maximum benefit from any patrol, it is essential that:

a. All patrols must be sent out with a clearly defined mission. In a reconnaissance patrol this should take the form of a question or series of questions posed to the patrol commander.

Fighting patrols will have tasks such as the search for and destruction of a party of insurgents or the prevention of contact between insurgents and civilians in a fixed area, e.g. in food control operations. The mission must be clearly stated and understood by the patrol commander and his men.

b. Adequate preparation and planning is made by the patrol commander.

c. The patrol is carefully and thoroughly briefed with all available information.

d. Information gained by the patrol is carefully checked on its return and recorded by the debriefing officer.

73. An "Aide Memoire for Patrol Orders" is attached as Annex C to this chapter. This aide memoire gives a comprehensive list of headings for consideration by a patrol commander. The items

The Rhodesian SAS Combat Manual

which should be included in his orders will depend on the task and likely duration of his patrol.

74. "Time in" as understood in normal military patrolling must be very elastic. Speed of movement is very difficult to estimate and the possibility of a contact makes it necessary to allow extreme latitude in this matter.

75. The problems of casualty evacuation when troops are committed to thick bush must always receive prior consideration by all commanders.

76. After briefing, a patrol commander must study maps and air photographs so thoroughly that he can make a reasonably accurate reproduction from the mental picture obtained. Whenever possible, he should be given the opportunity of meeting security force personnel having local knowledge of the patrol area.

77. Finally, he must appreciate the situation and make his plan before setting out on the patrol.

78. A debriefing proforma for use by all operational units is attached as Annex D of this chapter. This questionnaire should be accepted as a general guide to the types of information required from patrols. It may in addition help patrol commanders to know what is required of them as well as being of assistance for debriefing.

Patrol Formations

79. A patrol must be small enough to move silently and yet have sufficient fire power for effective offensive action. The strength of the patrol will be determined by the size of terrorist gangs known to be operating in the area.

80. Patrols must invariably be "all purpose" patrols, prepared to fight, ambush, pursue and reconnoitre. Formations adopted by a patrol will vary constantly throughout the patrol. As each type of terrain is encountered - open grassland, mopani park land and thick bush - the patrol leader should decide on the most suitable formation and give the necessary signal for his men to adopt this. In operations so far, however, the patrol formation found to be most satisfactory is the "three group" pattern with a command group centrally placed. (See Annex E to this chapter). Each individual group adopts its own most suitable formation but remains in its detailed position within the full patrol formation, e.g. the left forward group

could be in single file while traversing thick "jessi" bush and the rear group could be in arrow head, diamond or extended line depending on that piece of ground.

Platoon

81. The Platoon/Troop should consist of four groups:

a. The Troop Commander and his command group are positioned where control can best be maintained at all levels. The other groups are positioned to flanks and rear. Each of the groups should be given their arcs of responsibility for observation before the patrol moves out.

b. Each group has a radio for control either on the move or when deploying tactically on a contact.

c. No distances between groups are laid down as this will depend on the terrain. They should be sufficiently far apart to prevent an ambush of the entire patrol, but sufficiently close enough to be able to support each other by fire in the event of a contact.

d. With this grouping system, the commander has the capability of manoeuvring part or parts of his troop in the event of a contact depending on tactics being employed.

e. The open or closed formation is used depending entirely on the condition of the bush and ground being covered.

f. The group commanders must continuously appreciate the ground and vary the formation of their groups to suit it. Similarly the platoon commander must continuously appreciate the tactical position of the patrol in relation to the ground to be able to take considered, immediate action in the event of a contact.

Position of Commanders, Guides and Trackers

82.

a. Commanders. The position of the patrol commander will normally be that as shown in the diagrams. He is so positioned to enable him to control his patrol and to influence a battle by using his reserve, which he should normally control himself. He must not become so involved in the forward elements during contact that he cannot con-

The Rhodesian SAS Combat Manual

trol the battle.

b. Guides.

(1) The word "guide", as used here, means somebody with an intimate knowledge of an area or someone who can lead the security forces to a known insurgent location. These may be surrendered or captured insurgents or loyal Africans.

(2) The correct position for a guide is with the patrol commander. The patrol commander will make decisions as to direction and tactics using the guide's advice as he wishes.

c. Trackers. The position of the tracker team has been explained before. They are so positioned that no trails will be obliterated by members of the patrol but also to allow proper link up with the follow up patrol.

Maintaining Contact and Movement by Night

83. If it is necessary to patrol at night, the patrol commander should base his speed of movement on that of his rear element. In other words, responsibility for keeping touch must be from front to rear.

84. The flanks must maintain their position from the centre but their main attention must be focused forward.

85. Obstacles must be crossed tactically. A simple drill should be evolved for troops crossing obstacles. This will ensure all elements are over the obstacle before the patrol continues.

86. Movement by night in thick bush, such as elephant grass, without a guide or without intimate knowledge of the area can be difficult. However, it is never impossible.

87. If contact within a patrol is broken, both parts of the patrol must halt and:

a. The rear part of the patrol will quarter forward trying to follow the trail of the leading elements; this forward casting must be limited as it is often impossible for even highly trained troops to pick up the trail of a few men.

b. The leading elements must retrace their steps to bridge the gap; They should not start to do this so immediately the gap is noticed but should allow

five or ten minutes for the rear elements to cast forward.

Action when lost

88. If a member of a patrol is separated from the remainder of the patrol and is lost, he should remain calm and not panic. If he has no prearranged RV, he should try and get back to his patrol base. If he has no map and is completely lost, he should follow any river line until the river line heads to a well defined river. If a main river is found, and the lost person is still unable to orientate, he should keep following downstream until either a recognisable feature is seen or he comes into contact with civilisation. Firing a shot should only be used as a last resort as this action might bring an insurgent patrol looking and, secondly, it could break security.

Silent Signals

89. The silent signals given in this section are suggestions for use on all patrols and on every other operation requiring complete silence.

90. The signals shown below are in addition to those normally taught, i.e. advance, halt, etc.

a. Seen or suspected insurgent - Thumb pointed towards the ground from a clenched fist.

b. No insurgents in sight, all clear or OK - Thumb pointed upwards from a closed fist.

c. Support group - Clenched fist.

d. Recce group - Clenched fist with forefinger upright.

e. Rifle group - The Victory sign.

f. Section commander - Two fingers held against arm to indicate corporal's chevrons.

g. Platoon commander - Two fingers held on the shoulder to indicate lieutenant's stars.

h. You - Point at man concerned.

i. Me - Indicate the chest.

j. Give covering fire - Weapons brought into the aim indicating direction.

The Rhodesian SAS Combat Manual

k. Track junction - Arms crossed.

l. House or hut - Thumb pointing down from an open hand with fingers extended and down so as to form an inverted V between thumb and forefinger.

m. Reconnaissance - Hand up to the eye as though using a monocle.

n. Attack - Clenched fist swung vigorously in the direction attack is required.

o. Immediate ambush - Hand placed over the face followed by pointing to place for ambush.

p. Freeze - Halt signal.

q. Game sighted - Touch ear.

r. Spoor found - pug mark with hand.

s. Spoor lost - pug mark upwards.

Big Game

91. It is possible that inexperienced troops may think big game more dangerous than insurgents. If the following simple facts are borne in mind, however, the apprehension of the inexperienced will be relieved:

a. Elephant and buffalo have excellent senses of hearing and smell, and will usually move away if human beings are about.

b. All big game usually keep to game tracks. Therefore, provided bases are sited off the game tracks in tick bush where there is relatively little danger. If it is found necessary to site a base on a game track, most game can be prevented from using it if three members of the patrol base urinate on the track about 20 yards each side of the base.

92. Elephant, buffalo and rhino are particularly dangerous in areas which have been recently bombed. In these circumstances, they frequently charge on sight and particular precautions are necessary.

93. A knowledge of the reactions of certain game when scenting or encountering human beings is of value to patrols. Elephant, rhino and buffalo, should they suddenly stampede without apparent cause, may well mean that they have seen or scented humans. Baboon, monkey, bush-buck,

impala, reed-buck, "go-away" birds and honey guides give distinctive warning cries if they scent or see humans. A watch should be kept for circling vultures as they may well indicate a hideout where meat is left about. Hyenas calling repeatedly at night, or hyena tracks concentrating in one direction, may also mean a hideout.

94. Animals, being normally more frightened of humans than vice versa, seldom charge meaningfully. More often than not, so-called charges are only run away animals making off in all directions in blind panic. Herds of cow elephants with calves, and rhino and buffalo with calves, should be avoided at all times by moving round them downwind.

Return to Base

95. All patrols when returning to base must maintain maximum vigilance. The tendency for troops to relax and regard the patrol operation as having been completed must be avoided. To obviate ambushes, the return route to base must be different from that used on the outward journey.

96. It is essential that a drill is arranged for the reception of patrols returning to base. This can have considerable morale value in a campaign where abortive patrolling may be the rule rather than the exception. This drill, as well as catering to normal administrative matters, must include a post-mortem for every patrol which has had a contact or appears to have narrowly missed a contact. There is, in any case, the need for proper debriefing in comfortable environment.

Section 7 - ENCOUNTER ACTIONS

General

97. Encounters with the insurgents are sudden, short and often so unexpected that the opportunity to inflict casualties is lost. What is required is immediate, positive and offensive action.

98. For this reason, it is essential that simple Encounter Actions be taught and thoroughly practised. It is impracticable to attempt to cover every contingency by committing to paper numerous "Drills", because not only would they tend to cramp initiative, but they would not be read or digested or remembered in the stress of action. It is, however, important to teach an action to cope with any situation commonly met. The

The Rhodesian SAS Combat Manual

principles underlying the action must be simplicity, aggression, speed and flexibility.

99. Before a patrol leaves its base, the commander's briefing should include directions for encounter action. This is necessary each time because patrols vary in strength and organisation according to the nature of their task. In addition, the mention of the encounter actions applicable to the operation will act as a reminder to the troops taking part and so help them avoid being surprised.

100. Encounter Actions are of little value unless the standard of weapon handling and marksmanship is high and unless troops understand and remember instinctively the capabilities and limitations of the weapons with which they are armed.

The Encounter Actions

101. General. It is important to note that although Encounter Actions are usually taught on a section basis, they can be adopted for use by a platoon. These actions are applicable to the varied forms of terrain in Rhodesia and in all cases normal infantry minor tactics or section and platoon battle drills usually obtain after the initial contact. These encounter actions are a sound framework on which leaders at all levels should build as their experience dictates. It should be remembered, however, that no action, drill or order will achieve success unless the leader and men have practised them to a stage of instinctive action, reflex and immediate reaction to the firm and confident initiative on the part of the leader.

102. If a patrol is accompanied by people who have little or no knowledge of encounter actions, e.g. guides, informers, surrendered terrorists, etc., the patrol leader should keep them strictly under control and in his view. These people should be briefed as thoroughly as possible before the patrol starts. It may prove as well to rehearse encounter actions for these persons or even for inexperienced troops before a patrol moves out on operations.

103. Encounters with the enemy could fall under one of the following headings:

a. Situation A. The initiative is with the Security Forces (terrorists seen first).

b. Situation B. The initiative is split between the Security Forces and the enemy (simultaneous sighting).

c. Situation C. The initiative is with the terrorist (Security Forces are fired on or are ambushed).

104. Basically, the actions to counter the above situations vary little, except in the action carried out in the opening phases. It is possible to group the actions as follows:

a. Action 1: Situation A.

b. Action 2: Situations B and C.

(Note: no firm grouping is possible as actions are interrelated).

105. Action 1: For Situation A.

a. This would be used for situations when terrorists are seen first by the Security Forces.

b. Explanation of Action.

(1) Leading elements give silent signals.

(2) Depending on the cover and distance, Security Forces make any reasonably silent attempt to go to ground in the best possible fire position. Minimum movement may prove vital.

(3) The commander now makes a quick assessment and issues orders accordingly. His aim must be to eliminate as many terrorists as possible using the closest range and the best selected killing ground.

(4) Subsequent action is based on action 2.

(Note: the above actions are, in effect, a minor ambush. At platoon level it is not normally possible to deploy into a particular area. At section level it may be possible to move everyone into specific positions if movement is acceptable and the terrorists are approaching along a definite route, i.e. a track, river bed or game trail.

106. Action 2: For Situations B and C.

a. This action may be used when Security Forces:

(1) Encounter sentries outside a terrorist base perimeter or,

(2) Encounter part of the terrorist base perimeter or,

The Rhodesian SAS Combat Manual

- (3) Encounter a moving terrorist group or,
- (4) Encounter a visible static terrorist group (in a base, at a resting place, drawing water) or,
- (5) Are ambushed:
 - (a) After entering a base.
 - (b) From only one flank.

(Note: in the case of most situations detailed above, the Security Forces will not be able to confirm, until much later in the resulting action, that a base exists, or the extent of the base.

b. Explanation of the Action

(1) Elements in contact go to ground and put down a heavy weight of controlled fire with the aims of winning the fire fight and eliminating terrorists. It may be possible for these elements to execute immediate skirmishing.

(2) Patrol commander makes a quick appreciation and plan.

(3) If an assault is to take place, the route taken for deployment and assault depends on the ground. Consideration must be given to the deployment of cut off groups, possibly using the patrol reserve. The assault plan must include covering fire.

(4) Throughout the preliminary stages of this action, the patrol commander must ensure that the fire fight is won and the cut off groups are moved into position if at all possible.

(5) Normal reorganisation should take place after the assault, i.e. all round defence, clearance and security patrols, thorough search of the area, reporting the contact and preparation for follow up if necessary (see Section 9).

c. This action caters for situations where part of the security force patrol is pinned down. Where, however, the whole patrol is pinned down, the group will have to extricate themselves with maximum fire and manoeuvre. Only then can subsequent action be taken as a result of an appreciation and plan.

107. When a battle is at close range, the side that opens fire and applies the heavier and more

accurate weight of fire will win. Skirmishing movement will consolidate the fire fight. The encounter actions therefore, are normally "Go to ground, Win the fire fight". Subsequent action is based on the commander's initiative.

108. To some extent, the application of the actions explained above is affected by patrol formation. If the formation has a leading element of approximately one third of the total strength and the patrol commander moves in a position from which he can command and control any battle, the normal principles of fire and manoeuvre can be successfully applied. In all cases, the basic principles of platoon in battle must be applied by the commander to the circumstances of ground and situation.

109. It is most important to emphasise that there are three main actions that take place:

- a. Go to ground.
- b. Win the fire fight.
- c. And concurrently with a and b above, the commander must quickly assess the situation and give appropriate orders. (At all times the patrol commander is to keep his superior headquarters fully informed about the contact, e.g. what has happened, where it is happening, what the terrorists are doing and what the Security Forces are intending to do.

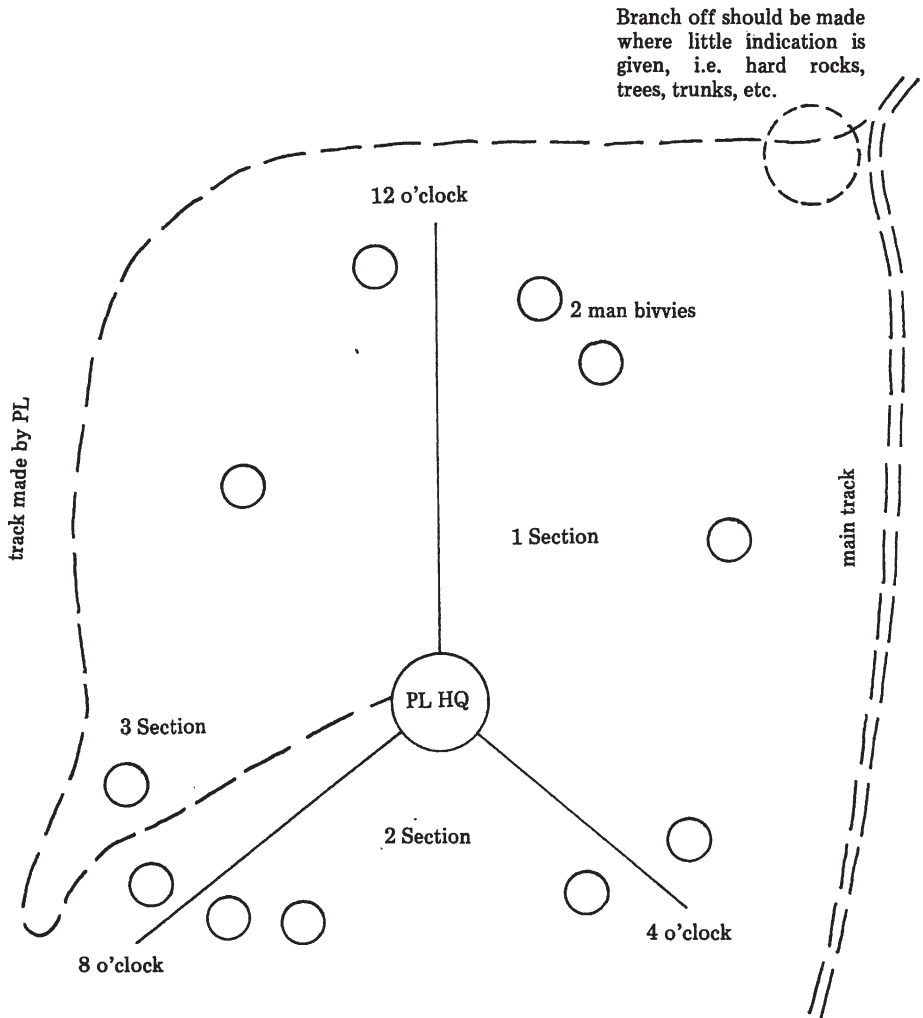
Section 9 - REORGANISATION

110. After an encounter action, reorganisation should be carried out as in normal battle drills. However, in COIN some actions are needed in addition to normal reorganisation procedures. The following sequence of actions should be adopted for the reorganisation phase after encounter actions:

- a. Take up all round defence.
- b. Attend to own casualties.
- c. Sweep and search the immediate area for terrorist casualties.
- d. Secure live terrorists and ensure no terrorists are feigning death.

Annex "A" to Rural Operations

Suggested layout of a platoon base



The Rhodesian SAS Combat Manual

Annex "B" to Rural Operations

Poaching Procedure: Friendly Forces Areas

General

1. During operations there will be occasions when a patrol following up an insurgent party, e.g. after a contact or by tracking, reaches the limit of its boundary and wishes to continue the follow up in another unit's or sub-unit's area.

2. To avoid delay in the follow up, quick clearance for a patrol to operate in another unit's area is necessary.

Principles

3. When clearance is required, the following principles will be observed as far as possible:

a. Within a battalion. Should a company request clearance to operate in the area of another company of the same battalion, authority to do so may be given by battalion HQ. Battalion HQ must inform the second company of the extent of the clearance and that company must, in turn, inform the platoon(s) involved.

b. Inter-battalion. When a battalion wishes to operate in another battalion's area, prior clearance from the second battalion must be obtained, either direct or through formation HQ. If clearance is

obtained direct, then the formation HQ must be advised as soon as possible.

c. Inter-formation. Under no circumstances will a patrol cross into the area of another formation without the authority of that formation. Clearance in these cases will be obtained at formation level.

d. Boundaries. Whenever clearance is granted, the cleared area will be bounded by easily recognisable natural features. Grid lines will not be used to define a cleared area.

Emergency Poaching

4. In an emergency, e.g. when communications are impossible, a patrol commander must decide whether the target is worth the risk of a clash with our own forces. Should he decide to cross it is incumbent upon him to ensure that:

a. Any insurgents seen are positively identified as such before fire is opened.

b. He is confident that he can identify himself to any friendly forces encountered before fire is opened by them.

5. When cleared entry into another unit or sub-unit's area has been made, full particulars of the reason for and extent of the entry will be given to the appropriate HQ as soon as possible.

The Rhodesian SAS Combat Manual

Annex "C" to Rural Operations

Aide Memoire for Patrol Orders

Situation

1.a. Topography. Use maps, air photographs, visual reconnaissance and patrol going map.

b. Insurgents in area.

- (1) Strength.
- (2) Weapons and dress.
- (3) Known or likely locations and activities including past history.

c. Movements by other Africans in area.

d. Own troops.

- (1) Areas.
- (2) Patrol activities of Security Forces.
- (3) Air activity.

Mission

2. This must be clear to patrol commander and takes the form of:

- a. Reconnaissance Patrol. A question or questions.
- b. Fighting Patrol. A definite objective.

Execution

3.a. Strength and composition of the patrol.

b. Time out and anticipated time of return.

c. Routes out and in.

d. Boundaries.

e. Authority to enter another unit or sub-unit's area of responsibility.

f. Formations and arcs of responsibility.

g. Deception and cover plan.

h. Action to be taken on contact.

i. Action if ambushed.

j. Action if lost.

k. DO NOT -

- (1) move in file in open country;
- (2) move through defiles;
- (3) return by the same route as that used for outward move;
- (4) relax because you are nearing base.

Administration and Logistics

4.a. Rations.

- (1) Type and number of days.
- (2) Resupply.
- (3) Cooking.
- (4) Dog rations.

b. Dress and Equipment.

- (1) Details of dress and change of clothing.
- (2) Maps, compasses and air photographs.

c. Avoidance of noise.

- (1) Does equipment rattle?
- (2) Warn against coughing.

d. Weapons. Types and distribution.

e. Ammunition.

- (1) Type and distribution.
- (2) Grenades, both 36 and 80.
- (3) Check grenade fuses.
- (4) Signal cartridges.

f. Medical.

- (1) First field dressing and J packs.
- (2) Medical orderly and haversack.
- (3) Water sterilizing tablets.
- (4) Salt tablets.
- (5) Camoquin.
- (6) Foot powder.
- (7) Casevac arrangements.
- (8) Identity discs.

g. Special Equipment.

- (1) Cameras.
- (2) Explosives.
- (3) Dogs.

h. Inspect all equipment for serviceability.

Command and Signals

5.a. Frequencies.

- (1) Times of opening communications.
- (2) Special Instructions.
- (3) Air.

The Rhodesian SAS Combat Manual

b. Codes.

- (1) Net Identification signs.
- (2) Codes.
- (3) Passwords.
- (4) Authentication Tables.

c. Check and test sets.

- (1) Aerials.
- (2) CW keys.
- (3) Spare batteries.

d. Ground/Air Communications.

- (1) DZ panels and DZ letters allotted.
- (2) Ground/Air signal code.
- (3) Steel mirrors/Aldis lamps.
- (4) Torches.

Check

6. Check thoroughly that all points have been understood by patrol members.

The Rhodesian SAS Combat Manual

Annex "D" to Rural Operations

Debriefing Pro Forma for Patrols

General

1. a. Area
- b. Aim.
- c. Strength and composition.
- d. Duration (with times and dates).
- e. Routes.

Topography

2. a. Was the intelligence briefing accurate? If not, what inaccuracies were discovered?
- b. Was the map accurate? If not, what were the inaccuracies?
- c. Were air photographs available? If so, was the interpretation useful?
- d. What was the state of the tracks followed?
- e. Where rivers were crossed or followed, are there
 - (1) Any bridges? What type?
 - (2) Fords?
 - (3) Recent tracks near crossing places?

Camps found

3. a. Grid reference.
- b. If occupied, by how many? If not, how long has it been vacated?
- c. Total accommodation.
- d. Any sentry posts? If so, how were they sited?
- e. Any warning signals?
- f. Give details of entry and exit tracks.
- g. Was it a permanent or transit hide?
- h. If permanent, give details of the layout.
- i. Any food dumps in or near the hide or any signs of cultivation?
- j. Any subsidiary camps?
- k. Any arms or ammunition found? If so, what condition and quantity?
- l. Any documents found? If so:
 - (1) Where were they found?
 - (2) Place of finding marked on each document?
 - (3) Where are they now?
- n. Direction of travel when insurgents departed?

Contacts with insurgents

4. a. Where contacted?
 - b. How many?
 - c. How were they dressed?
 - d. Details of arms and condition.
 - e. Any estimate of quantity of ammunition per man?
 - f. Any indication of condition of ammunition?
 - g. Any pointer to identification of commanders?
 - h. Any snipers?
 - i. Any automatic weapons?
 - j. Did they appear healthy?
 - k. What was their morale?
 - l. Did they use any system of signals?
 - m. Any casualties?
 - (1) Own troops.
 - (2) Terrorists.
 - n. Any captured insurgents?
 - o. Any surrendered insurgents?
 - p. Have the dead insurgents been identified?
- If not:
- (1) Any photographs taken?
 - (2) Any fingerprints taken?
 - (3) Any recognizable features?
- q. When engagement was broken off:
 - (1) In what direction did insurgents leave?
 - (2) Did they use known tracks?
 - (3) Where were the insurgents' tracks lost?
 - r. Insurgent tactics.
 - (1) Formations?
 - (2) Distribution of weapons?
 - (3) Evidence of pre-planned RVs?
 - (4) Reactions?
 - (5) Any information on base areas?
 - s. Camp followers and/or food carriers? What food was carried and how?
5. Any comments.

The Rhodesian SAS Combat Manual

Annex "E" to Rural Operations

Tracker Team and Patrol Formations

General

1. Experience gained by Rhodesian Security Forces in the past few years has resulted in basic principles on which operational units now base tracker team and patrol formations. These principles have evolved from normal border control duties, minor operations and major operations. Contacts have occurred as a result of deliberate follow-up patrolling and from chance contacts during frame-work patrolling in operations.

2. In all cases, the commander of the patrol decides how best to move through the particular type of country in which his patrol is operating. There are only two main patrol formations; the Single File and Open Formation, both of which adequately cater for thick bush and open country. The tracker team and normal patrol, or both if they are working together, are able to adopt these formations to cover the ground being searched and provide good protection.

Formations

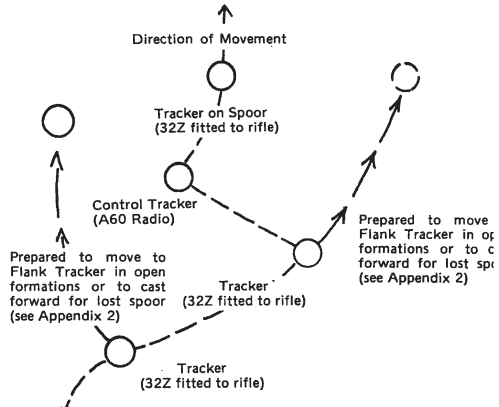
3. Only the outline requirements can be given in the following diagrams. Each regular unit has developed its own ideas on the best detail within each formation. However, it is generally accepted that the ideal tracker team works as a four man group while patrol formations should be based on three main groups plus a control or headquarters group. Within each group actual formations adopted could vary depending on personalities in command, unit training, likes or dislikes and the type of country or terrorist confronting the members of the patrol.

4. The following appendices give formation details of Tracker Team, Patrol and a combination of both. Leaders should rehearse their own manoeuvring in the bush using the following ideas as a guide. During rehearsals, practice or basic training, finer details can be developed to the satisfaction of all who will make practical use of the formations in actual operations.

Appendix 1 to Annex "E"

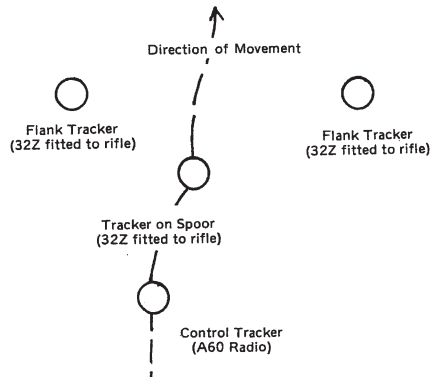
Tracker team formations

A. Single File (thick bush being penetrated)



Appendix 2 to Annex "E"

B. Open Formation (traversing open country)

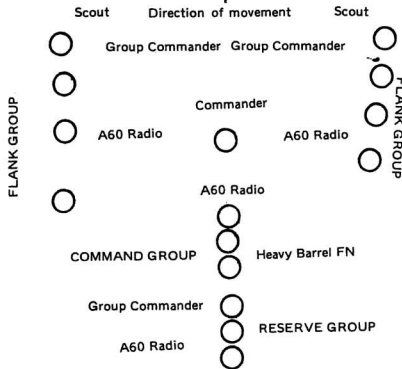


The Rhodesian SAS Combat Manual

Appendix 3 to Annex "E"

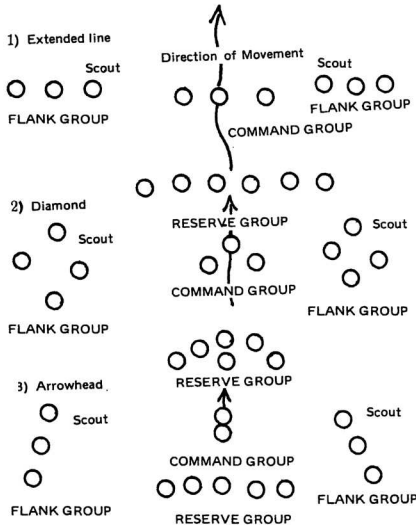
Patrol Formations (no Tracker Team attached)

C. Single File (Thick bush being penetrated)



Appendix 4 to Annex "E"

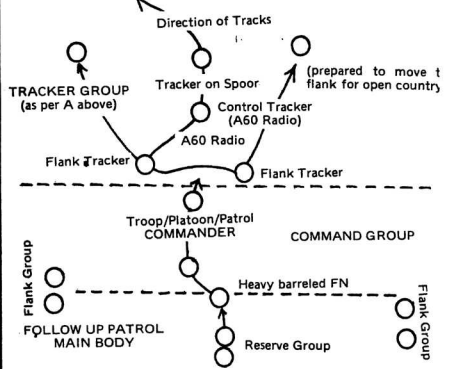
D. Open Formation (traversing open country)



Appendix 5 to Annex "E"

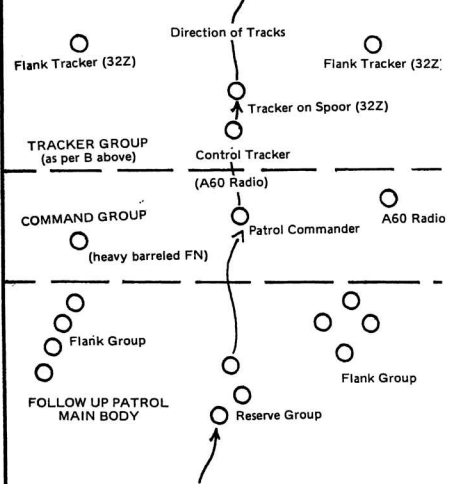
Patrol Formations (Tracker Team attached)

E. Single File



Appendix 6 to Annex "E"

F. Open Formation



The Rhodesian SAS Combat Manual

Annex "E" to Rural Operations

Notes

a. The four group system has, in all cases, Flank and Reserve groups with the command element located centrally. Each group could adopt any one of several formations to cover the ground efficiently. There may even be occasions when the commander prefers to keep two thirds of his strength in reserve (one up, two back). This is the commander's prerogative and he must decide after considering all relevant factors. The size of the patrol dictates the number of men in each group; if the patrol is only four man strength, the Tracker Team Single File or Open Formation can be adopted (see A and B above). As the strength increases, so can the number of men in each group.

b. Distances between individuals will vary according to visibility, but five yards is the most convenient guide. Distance between groups is

tactical but certainly within visual distance for silent signals and control.

c. The patrol moves behind the trackers and must avoid interfering with the Tracker Team duties and tactics. The patrol commander commands the whole follow-up patrol, including trackers, but he should discuss formations, distances and personal preferences with the Control Tracker before moving out on a patrol. This should eliminate any misunderstandings and avoid unnecessary confusion. It will also allow coordination between trackers and patrols which may have special requirements.

d. The allocated position of patrol personnel within groups is not rigid. Each commander has his personal preferences and factors can influence this detail. The positioning of various types of fire support available is also flexible and personal preferences override any attempt to dictate rigid drills, e.g. 32Zs fitted to rifles, position of heavy barreled FNs, positioning of the MAGs or radios.

The Rhodesian SAS Combat Manual

Annex "F" to Rural Operations

Deliberate Attack on a Terrorist Camp

General

1. It is difficult to lay down a uniform drill for a preplanned attack on a camp which will apply on all occasions as terrorist tactics and the type of locations used for camps vary considerably from area to area.

2. The suggested drills can, however, be easily amended to suit different circumstances and can be used as a basis for initial planning on those few occasions when information from air photographs, prisoners or informers points conclusively to an occupied camp being at a certain place. If the operation is undertaken on the information of an informer, it must be carried out as soon as possible as gangs move their camps when they suspect a breach of security. The interrogator should try to discover the location of a gang's alternative camp, their emergency rendezvous or, at least, the most likely direction of escape.

3. Although the example outlined below is concerned with a daylight attack on a terrorist camp, this does not preclude the possibility of attacking at night. The basic principles remain the same although follow-up action is normally only feasible during daylight hours.

Terrorist Tactics

4. It cannot be assumed that terrorists will automatically abandon their camp. Experience has shown that, on occasion, terrorists will oppose security force attacks in an aggressive manner from well prepared positions.

5. The main factor to be borne in mind is that terrorist sentries will be alert and will give warning of any suspicious movement. By day it will be difficult to get past them. A study of terrorist habits has revealed the following facts:

a. Positioning of Sentries.

(1) Usually posted on likely approaches to the camp.

(2) At night, sentries are posted in close proximity to, or within, the perimeter of the camp.

b. Duties of the Sentries. As soon as the security

forces are seen, either the camp sentry will warn the gang or, if deployed, the sentry on the approach will warn the gang in a number of ways:

- (1) By running to the camp and alarming the gang.
- (2) By various animal or bird like calls.
- (3) As a last resort, by firing a shot.

Composition: Attack Force

6. On each occasion when a deliberate attack on a terrorist camp is being planned, there is a requirement for the security forces to be broken down into a number of groups. Ideally, the attacking force should consist of the following groups which can normally be found from a rifle company or commando:

- a. Stops
- b. Fire Group
- c. Assault Group
- d. Command Group
- e. Follow-up Group
- f. Reserve

7. It may not always be possible to achieve this breakdown with the troops available and it will, therefore, be necessary for certain groups to combine their roles, e.g. the Fire Group could also be detailed as the Follow-up Group, etc.

8. All plans should be based on the correct use of these groups. Examples of their employment and handling are as follows:

a. Stops.

(1) They must be deployed to cover all likely escape routes from the camp.

(2) They must be deployed at such a distance from the camp so as not to prejudice the secrecy of the operation.

(3) The strength and number of the stop groups to be deployed is dictated by the terrain and circumstances prevailing at the time, but if possible they should be based on sticks of five.

(4) Careful briefing is necessary and the following should be borne in mind:

(a) If possible, before a target is engaged it should be identified.

(b) Stops should be in concealed positions.

(c) Each stop group should know the position of its neighbors.

(d) Individual stops should not move from their positions until ordered to do so. However, should this become necessary, the stop or stops must ensure that those on their flank are aware of it.

The Rhodesian SAS Combat Manual

(e) Stop groups should be equipped with radios.

b. The Fire Group. The task of the Fire Group will be to approach as near as possible to the camp undetected and to open fire on the enemy with every available weapon. It will also be required to give support to the Assault Group. The principle of bringing maximum fire to bear on the camp must be balanced against the difficulty of moving too large a body of men through the bush without alerting the enemy. On occasion, it may be necessary to reduce the strength of this group and increase the ratio of automatic weapons.

c. The Assault Group. Since a proportion of the enemy may survive, it is essential to have an Assault Group, which has not been tied down by the initial fire fight, to assault the terrorist camp. The task of the Assault Group will be to skirmish forward, covered by the Fire Group, to clear the camp. Immediately after the assault, the Assault Group commander should split his force and detail one group to search the interior of the camp area. The other group should ascertain by a 360 degree search of the perimeter whether any terrorists have broken out of camp. The Assault Group will be responsible for collecting captured terrorists, weapons, equipment, etc. and may be required to ambush the camp area in the event that some terrorists may return in search of kit or food or to reorientate themselves if lost. The size of the Assault Group will vary according to the size of the camp and the strength of the enemy.

d. The Command Group. A small command group should be positioned so as to control the attack. This group will consist of the commander, accompanied by his radio operator, medical orderly and interrogator, if one is available. However, it may be necessary at some stage of the battle for the commander to get airborne in order to assess the overall situation.

e. Follow-up Group. The task of the Follow-up Group is self explanatory. However, before any follow-up is commenced, sufficient time must be allowed for the Assault Group to complete their 360 degree search for tracks and for any terrorists who escape to reach the stop positions. Any follow-up should be carefully coordinated and the stops warned of the direction. This group may well be found from the Fire Group or the Reserve.

Supporting Fire

9. Air. When planning a deliberate attack, cognisance must be taken of available air support.

a. Light Aircraft. This type of aircraft is particularly useful and can be employed in the following roles:

- (1) Armed air support, either for the initial assault or at a later stage in support of Stops or Follow-up Group.
- (2) Reconnaissance.
- (3) Radio Relay.

b. Helicopters. Roles to be considered include:

- (1) Aircraft and stick(s) of troops on immediate stand-by as a mobile reserve for redeployment to counter unexpected moves by terrorists or to reinforce or redeploy Stops.
- (2) Airborne Control.
- (3) Evacuation of casualties and terrorists.

c. Fighter Ground Attack or Bombing. In certain circumstances, the initial assault on the camp may be more effectively carried out by aerial attack using front guns and/or rockets and bombing. An attack of this nature requires detailed coordination particularly of timings and safety distances. All groups should be equipped with ground to air communications.

10. Artillery and Mortars. If available, artillery and mortar support should be considered. In the event of their being used, FOOs and MFCs should accompany the Command Group.

Sequence of Action

11. In ideal circumstances, the following sequence of action and timings are recommended:

a. Night D - 1/D. During the night, the company moves to a waiting area pre-selected at a suitably secure distance from the camp. The Stops move off and take up their positions; in some cases this might be difficult and final adjustments might have to be made to their positions after first light.

b. D Day.

(1) Stops use the 15 minutes (or more if necessary) just after first light to adjust their final positions. The Fire and Assault Groups move forward to their selected positions before first light.

(2) At H Hour, fire is opened on the camp on the order of the Force Commander.

The Rhodesian SAS Combat Manual

(3) The Assault Group skirmishes forward and clears the camp area. They carry out a thorough search and also try to ascertain whether any terrorists have escaped and in which direction.

(4) The Stops engage any escaping terrorists who approach their positions.

(5) The Force Commander must then decide from the available information to:

(a) Start the follow-up on tracks from the camp while the stops remain in position.

(b) Withdraw the Stops to a prearranged RV and then start the follow-up.

(c) Order the Stops to patrol either left or right to the next Stop position to check whether the terrorists have crossed the Stop line. If tracks are found to start an immediate follow-up.

(6) The Force Commander then reports casualties,

prisoners, etc. and means of evacuation.

7. The Force Commander will, if necessary, plan an area ambush on the camp area.

Platoon Attack

12. Manpower limitations with the platoon/troop will normally prohibit the formation of all of the groups detailed above. Nevertheless, at times it may be necessary to carry out a deliberate attack on a terrorist camp at platoon/troop level.

13. For a platoon/troop attack, the same basic principles apply. If a follow-up becomes necessary this should, in the average case, be undertaken by the entire platoon/troop. Further troops would then be required for ambushing the terrorist camp if necessary.

The Rhodesian SAS Combat Manual

Annex "G" to Rural Operations

Contact/Incident Report Message

1. To differentiate between Contact and Incident, the message must be prefixed by that word said twice and acknowledged by control before transmitting the message.

Code	Contact Contact-Contact	Incident Incident-Incident
a. Accurate grid reference	"ALFA PQ741263"	"ALFA PM443517"
b. Date/Time of Action	"BRAVO 061230"	"BRAVO 301745"
c. Situation	"CHARLIE Enemy Camp"	"CHARLIE Farm Attacked"
d. Estimated Terrorist Strength	"DELTA 10"	"DELTA 6"
e. Terrorist Casualties	"ECHO killed 3, wounded 2"	"ECHO nil"
f. Details of SF involved	"FOXTROT 9 Pl C Coy 1 RAR"	"FOXTROT Five PATU Sticks"
g. SF/Civilian casualties	"GOLF Wounded 1"	"GOLF Farmer and Wife shot dead"
h. Follow-up action and direction	"HOTEL Follow-up down river"	"HOTEL Follow-up failed"
i. Other information including: evacuation of casualties and PW giving RV and time. Must include time of detailed report.	"INDIA Casualties and PW 6 at road junction PQ 701123. De- tailed report on next schedule."	"INDIA Bailiff investigating"

Note: Casevac details must be reported as soon as possible.

The Rhodesian SAS Combat Manual

Annex "H" to Rural Operations

Principles of Laying Booby Traps

Note: At the time of publication, the laying of booby traps is prohibited.

When setting booby traps, the undermentioned principles should be observed. It is not always possible to apply all the principles to any one trap. If, however, they are continually borne in mind and become automatic, any resultant traps will be most effective and the aim will be achieved. It should be remembered that booby traps are not used only in limited war. It has been proved in Angola and Mozambique that booby traps can be used very effectively in insurgency and counter insurgency operations. These basic principles remain the same. The principles are:

1. Concealment. It is pointless to set a trap if the charge and mechanism are not properly concealed. Mechanisms, both standard and improvised switches, are small and easily concealed. The charge, however, is usually larger and more difficult to conceal. The means of connecting the charge to the mechanism, be it electric wire, detonating cord, safety fuse or instantaneous fuse must also be concealed. The surrounding area must be disturbed as little as possible. Furthermore, certain high explosives have a strong odour which may give the trap away. In one respect this is an advantage as game will avoid the strange odour and will not spring the trap accidentally. If odourless explosives such as PE 4 and CE-TNT are used, the accidental springing of traps by game can be avoided by urinating around the traps and mechanism. This will drive game away.

2. Constricted Localities. The more constricted and confined the area where the trap is laid, the greater the chance of it being sprung and also the greater the chance of inflicting casualties. Defiles and narrow footpaths on ledges are ideal sites.

3. Concentration of Traps. Wherever possible, traps should be laid in considerable concentration. The more traps or mechanisms there are, the greater the chance of at least one of them being sprung before being detected. There is no reason why a number of mechanisms should not have a common charge. When doing this, the next principle can be used very effectively.

4. Double Bluff. Wherever possible, use one

mechanism to distract the attention of the enemy from another. You can use a dummy mechanism to do this. Picture a person tracing a trip wire to locate a mechanism. He would not be paying much attention to a second trip wire at right angles or a buried pressure mechanism or a tilt switch attached to a tree branch across his path. On the other hand, he might not be interested in tracing the mechanism of an obvious booby trap and merely move round to avoid it. A carefully concealed trap to a flank would get the same result.

5. Inconvenience. Traps can be made to operate by the removal of an obstacle such as a fallen tree or an animal carcass. Remember that insurgents are very suspicious of unnatural objects and will probably detour around the intended trap. There are, however, only two courses he can take; to the left or right. Where this is a possibility, trip wire operated mechanisms can make a lethal zone using aerosol tins and plough discs.

6. Curiosity. The saying "Curiosity killed the Cat" is very true when dealing with booby traps. The trapping of attractive items and souvenirs, containers, food, clothing and items useful to insurgents is a sure way of activating a trap. The success of such a trap depends on the degree of training of the insurgents.

7. Everyday Operations. (Instinctive reaction). How many people think twice before turning a door handle, pulling the toilet chain or kicking an empty can in their path? What about diving for cover when fired upon or taking shelter from the rain under a rocky ledge?

8. Attraction. Attract a person or number of persons to a heavily booby trapped area. In urban areas, this can be done by starting fires with delay mechanisms. In rural areas, tie a wild animal securely to a tree. How many of the indigenous population of Rhodesia would miss the chance of killing a wild animal which appeared to have been snared and is not capable of running away. A word of warning. Make sure you attract the right people, i.e. insurgents.

9. Alternative methods of firing. This principle is closely linked with Double Bluff. One mechanism can be activated by the removal of another or of the main charge.

10. Variety. Use a variety of mechanisms. The enemy will soon learn how to deal with one type.

The Rhodesian SAS Combat Manual

Annex "I" to Rural Operations

Booby Trap Proforma

Record of Booby Trap No.....
(to be completed in duplicate)

Part 1 - Laying

1. Location

- a. Map: Sheet No.....Title.....Scale.....
- b. Grid Reference.....
- c. Completed sketch map overleaf.

2. Laying Party

- a. Laid by No.....Rank.....Name.....Unit.....

Attached to.....(if applicable)

- b. Officer/NCO IC Party: No.....Rank.....Name...

- c. Remainder of Party: (names, ranks, subunits)

3. Details of trap (delete those non-applicable).

- a. Description of Trap: Shrapnel charge, aerosol bomb, other.....(detail)

- b. Above/Below/On ground level. Height/Depth in feet/inches.....

- c. Camouflaged with.....(material)

- d. Activated by: Trip wire/pressure switch/release switch, other.....(detail)

- e. Safety Device Type.....

Location.....

- f. Lethal Area/Zone:.....
(Mine) (Directional weapon)

- g. Safe route to trap.....

Bearing.....

Date/Time trap laid.....Month.....Year....

.....
Signature of Layer Signature of IC Party

Subsequent Action

1. On trap being found blown (see note)

- a. Date/Time group.....
- b. Signs of casualties.
 - (1) Human/animal.
 - (2) Blood - direction of trail.
 - (3) Clothing or equipment.
 - (4) Other.

- c. Size of crater: Depth.....Width.....
or Spread of shot:.....

- d. Other:.....

2. On trap NOT being found blown:
(delete non applicable)

- a. Trap left.
- b. Trap disarmed and removed.
- c. Trap blown in situ.

.....Hours.....Date.....

.....

Signature of IC Party

Note: When completing paragraph 2, do NOT strike out paragraph 1 as this may be needed later if 2.a. is actioned.

Sketch Map

Scale (approx.).....

Direction of NORTH (arrow).....

The Ambushing of Insurgents

Section 1 - Policy

General

1. A higher proportion of insurgent eliminations are achieved by ambushes with better opportunity for kills than any other form of contact. Particularly when chances of contacts are remote, it is essential to take full advantage of every chance offered. Ambushes laid as the result of direct high grade information must be based on sound and detailed planning with execution by specially selected troops.

2. This chapter sets out the basic doctrine for the planning of ambushes laid as the result of information or suspicion, or as part of a large scale operational plan. The aim of such an ambush is to contact the insurgents under circumstances of the attackers' choosing.

3. The majority of ambushes are laid as a result of:

a. Intelligence provided by Special Branch through direct or indirect information from surrendered insurgents, agents and informers;

b. Chance information;

c. An appreciation of likely insurgent movement and activity based on familiarity with an area coupled with the history of insurgent movements in the area concerned.

4. To fully exploit the information received from SB agents, it is essential to choose the best possible team to make the contact. This may frequently entail a company commander leading an ambush group, although it may consist of only a handful of men. Men especially selected for their marksmanship or other particular qualities should be drawn from any element of the unit and, in fact, the ambush group may consist of men from different services. The overriding consideration in selecting the ambush party is to choose the team most likely to succeed in that particular case.

The Principles of Ambushing

5. To achieve success, spontaneous coordinated action on surprised insurgents held within a well covered killing area is needed. This requires:

a. Good shooting from all positions - kneeling, sitting, standing, lying and firing behind cover;

b. A high standard of training in ambush techniques.

c. Careful planning and briefing;

d. First class security in all stages of the ambush;

e. Intelligent layout and siting;

f. Concealment;

g. A high standard of battle discipline throughout the operation;

h. Determination by all members of the ambush party to wait and kill;

i. A simple plan for springing the ambush.

Section 2 - The Layout of Ambushes

General

6. Principles. There are two fundamental principles of general layout:

a. All possible approaches should be covered.

b. The ambush must have depth.

7. Approaches. Information may frequently give the destination of the insurgent but will rarely give the exact route they will take. However good information may be, insurgents may well arrive from an unexpected direction. It is, therefore, essential to cover all possible approaches.

8. Depth. At the first burst of fire, insurgents scatter with remarkable rapidity and the chance of getting a second burst from the same position are small. It is important, therefore, that groups

The Rhodesian SAS Combat Manual

should be so sited that when the insurgents scatter after the first burst, subsequent groups take a progressive toll of any survivors.

The Ambush Group

9. An ambush is made up of a series of small groups of men. The size of these groups will vary, but two to six men can be taken as a guide.

10. The group should be self contained. A leader must be nominated and arrangements made for rest. It is not possible for men to remain alert for six to eight hours. One or two men in a group will be listening and watching while the others rest in the ambush position. Rest means that a man relaxes in his position, resting his eyes and ears. This should eliminate fidgeting and dozing.

11. In siting his group, the commander must:

a. Consider concealment as his first priority. (Movement in the area must be kept to a minimum even at the expense of indifferent fire positions. each man should enter his position from the rear. The group commander must ensure that all traces of movement into the position are removed or concealed);

b. Ensure that the man detailed to spring the ambush has a good view of the killing ground;

c. Ensure that other men of the group will have good fire positions when they break through their concealment, i.e. to stand up to engage moving insurgents;

d. Site his men in a position of all round defence;

e. Choose his own position for maximum control.

12. Types of ambush. Groups may be employed in two ways, bearing in mind the principles of layout:

a. Area ambush. Where there is more than one approach, all must be covered. Approaches should be covered in depth to catch insurgents scattering from the position of the ambush. Such an ambush is known as area ambush (see Annex "A"). It consists of a series of small groups, each with its own commander, sited as part of an overall plan to encompass a particular insurgent party. The groups may be laid out as limited ambushes (see 12b below). Area ambushes are likely to be more

successful than limited ambushes.

b. Limited ambushes. When, because of the ground, there is only one likely approach, a group or groups may be sited in depth all round defence at a place on that route which gives adequate concealment. This is a limited ambush (see Annex "B"). It is used when the area ambush is impossible or as part of an area ambush along a very likely approach trail.

Section 3 - The Sequence of Laying an Ambush

Planning

13. Many factors affect a plan for ambush. The following are common to all ambushes:

a. Information. Information on the ambush area can be obtained from maps, previous patrol reports, Police, surrendered insurgents and air photographs.

b. Clearance. Movements of other troops in the area must be considered.

c. Time factor. The necessity of being unseen, coupled with knowledge of the habits of the local population will dictate the time at which it is safe to move into the ambush area.

d. Security. Intentions of our own troops must be disguised from the start, e.g. by moving out to the ambush position during the hours of darkness and making false moves. The telephone should not be used when discussing plans for an ambush. A cover plan should always be made when time is available.

e. Ground. All possible approaches should be considered. When considering likely ambush sites such as defiles and water crossings, the obvious should be avoided.

Preparation for Ambush

14. a. Success depends on adequate preparation. The time available for preparation is often limited. Certain items must therefore be kept in a state of constant readiness, e.g.:

(1) weapons must be kept zeroed and tested;
(2) ammunition, magazines and chargers must be kept clean and frequently emptied and refilled.

b. Preparation on receipt of information should include:

The Rhodesian SAS Combat Manual

- (1) thorough briefing;
- (2) rehearsal, when time allows;
- (3) firing practice, if time allows;
- (4) final checking of weapons.

15. Briefing. All members of the ambush party must be fully briefed. It is suggested that the briefing be divided into two parts:

a. Preliminary briefing at static location. This should include the items shown in Annex "C".

b. Final briefing in the area of actual ambush by the commander of that ambush. This is to be kept to the minimum but must include:

- (1) General area for each group including direction of fire.
- (2) Orders for springing the ambush.
- (3) Orders on completion of the ambush.

16. Rehearsal. The more time devoted to rehearsal, the greater the chance of success. Rehearsals should not be carried out at the ambush site as security will be immediately prejudiced. It is usually possible to select a site for rehearsal closely resembling the actual ambush position. All possible and likely insurgent action should be simulated and the ambush groups practised in springing the ambush under a variety of circumstances including unexpected eventualities.

17. Rehearsals for night ambushes should be done at night. Where it is proposed to make use of night illumination aids, these should also be employed.

18. Siting

a. Area Ambush:

(1) The ambush commander first chooses a killing ground and the general area for each group from his personal knowledge of the area aided by maps and air photographs. He is to lay down the direction of fire for each group in order to obtain maximum fire effect from the weapons at his disposal, and to ensure safety for his own troops. He is to nominate the RV and give the administrative plan.

(2) The ambush party moves to a dispersal point from which groups move by carefully selected routes to their positions. The ambush commander may only be able to site one position in detail, leaving the remainder to be sited by the group commanders.

(3) Each group commander is then to carry out his reconnaissance, siting and issue of orders.

b. Limited Ambush:

On reaching the ambush area, the commander:

- (1) Makes his reconnaissance to choose a killing ground and consider the extent of his position, bearing in mind the distance between insurgents. (A killing ground of 60 to 100 yards is desirable. The ambush position should offer concealment but should not be in an obvious ambush position);
- (2) ensures that the man nominated to spring the ambush has a good view of the killing ground.

19. Occupation. The occupation of an ambush position should be carried out with great care. All routes made by the ambush party must be carefully concealed. Remember that suspicious items such as paper scraps, footprints and bruised vegetation put insurgents on their guard. It is essential that all items with a distinctive smell be left behind as they will betray the presence of an ambush party to the insurgents. Mens' hair should be washed free of hair oils and hair creams, cigarettes should be withdrawn, sweets, chewing gum and other scented food, including curry powder, must not be carried. It is frequently necessary to have bare feet or wear PT shoes for the move into positions. When allotting tasks and fields of fire for weapons, it is seldom possible to site each weapon with a good field of fire. Each individual must be able to see his arc of responsibility and must be prepared to fire from any position, on the ambush being sprung.

20. Lying in Ambush. Once a group is in position, there must be no sound or movement. This is a test of training and battle discipline. Men must be trained to get into a comfortable position and remain still for long periods. During the wait, weapons must be cocked and in a state of instant readiness to fire (i.e., safety catches forward).

21. Springing the Ambush. The ambush should be sprung when all possible insurgents are in the killing ground and the range has been reduced to the minimum. There must be no half-heartedness or premature action. All men must clearly understand the orders and drill for opening fire.

a. When springing an ambush, fire should not be opened so long as insurgents are moving towards someone in a better position to kill. A limited ambush will normally be sprung by the commander.

b. Should any insurgent act as though he has

The Rhodesian SAS Combat Manual

spotted the ambush, any man who sees this should spring the ambush.

c. All shots must be aimed to kill. Once fire has been opened, targets become more difficult and men may have to stand to cope with moving targets.

d. A signal must be arranged to stop firing so that immediate follow-up and search can begin as soon as it is impossible to engage insurgents.

e. When the ambush has been sprung, men who have been previously detailed are to search the immediate area under cover of ambush weapons and covering each other. They will:

- (1) check insurgents in the killing area and secure any who are still living;
- (2) search surrounding areas for dead and wounded;
- (3) collect arms, ammunition, equipment and any other clues which may materially assist Police investigation.

22. A definite signal for calling off the ambush must be arranged. This is particularly important in area ambushes or night ambushes to avoid groups running into other ambush parties. No movement to contact an ambush group in situ should ever take place in darkness.

23. Rendezvous. An easily found RV must be selected where troops will rally at the end of the action on receipt of the prearranged signal. This cannot be stressed too strongly as officers and men have been killed in other theatres when returning to collect a man left in the ambush.

Section 4 - Prevention of Accidents

24. Cases have occurred in other campaigns where soldiers and police were shot by parties of SF which were waiting to ambush the insurgents.

25. The primary cause is that the ambush party is keyed up expecting the arrival of the insurgent in the area of the ambush and, on seeing any movement, fire is opened. Often, conditions are such that it is not possible for the ambush group to recognise the identity of the people entering the ambush area.

26. Once an ambush has been set, there should be no movement of any kind by SF anywhere near the ambush position, unless it is unavoidable.

27. When such movement must take place, it must be very carefully planned and rehearsed. In all other cases once clearance has been given for the ambush to take place, no movement of any kind is to be allowed.

28. It is as important to observe fire discipline in ambush operations in close country as in any other form of operations.

Section 5 - General

Training

29. As ambushing is the most successful means of killing insurgents, time must be given to training for it. This is particularly important for group leaders. Training must be aimed at eliminating common faults and improving techniques. Its objects are to:

- a. achieve silence and stillness in ambush;
- b. train troops to occupy ambush positions without advertising their presence by smells (curry, chewing gum, cigarettes), by paper scraps, crushed vegetation and footprints;
- c. ensure good siting of weapons and positioning of commanders;
- d. improve fire control and, particularly, the even distribution of fire;
- e. practise clear, well understood drills for springing ambushes, follow-up and search;
- f. ensure accurate shooting at difficult moving targets;
- g. improve care of weapons and eliminate stoppages.

Tracker Groups and Patrol Dogs

30. A great many insurgents wounded in ambush get away. In many cases they escape by running into the undergrowth and laying low until the hue and cry has died down when they can crawl away. The employment of tracker groups will quite often lead to their capture or elimination.

31. Experience has shown that the blood trail left by wounded insurgents is not always an aid to a tracker dog and is sometimes more useful as a

The Rhodesian SAS Combat Manual

visual aid to the human tracker.

32. The tracker group should not form part of the ambush party, but should stand by at some convenient RV ready to move when shooting indicates that the ambush has been sprung.

33. Under certain circumstances, patrol dogs may form part of the ambush group. They may be most profitably employed where several alternative routes lead into the ambush position and it is not known which route the insurgents will take. It must be borne in mind, however, that their presence may give the ambush position away to the insurgents as they pant, make other noises and are smelly. However, when used they will invariably be alert before any human being.

Administration - Long Term Ambushes

34. Most ambushes are sprung within nine hours of setting and require no administration other than arrangements for rest within groups. These are called short term ambushes and are the normal ambush.

35. Where ambushes are set for periods of more than 12 hours they become long term ambushes and administrative arrangements for relief of groups for feeding and sleeping are necessary. Such an ambush may be placed on the approaches to a cultivated area which is ready for harvesting, or on the approaches to a known insurgent camp.

36. In long term ambushes, an administrative area must be set up. It should be sited at least 500 yards from the ambush position, far enough to avoid noises and smells disclosing the presence of troops. Communication lines may have to be cleared and swept to enable silent relief to be carried out. Water should be available.

37. Careful consideration must be given to the problem of reliefs, particularly in the case of the area ambush. Normally, the relief will come from the administrative area along the communication lines. Although the whole party in the ambush will eventually be relieved, only one fire position should be changed at a time in case the insurgents come during this period. The reliefs should take place when no insurgent movement is expected.

38. The ideal is that ambushes should be divided into three parties; one in the ambush position, the reserve and the party at rest. On relief, the party

at rest takes over the ambush position, the men in the position go to the reserve and reserve goes to the rest area.

39. If the party is less than six and the duration of the ambush long, the whole party should be withdrawn during set periods to rest. Such a party would be responsible for its own security when resting.

40. When an ambush party is over six, but not large enough to carry out the three groups method, sufficient men for all round observation should man the ambush. The others move away from the ambush position, post sentries and rest. The party at rest is to act as reserve and is not, therefore, to go far away. It is not to smoke and its food is to be pre-cooked.

Section 6 - Ambush by Night

41. The doctrine for day ambush also applies to night ambush. Concealment is easy in darkness, but shooting is obviously less accurate. Much depends on good siting of weapons so that the killing ground is interlaced with fire.

42. The following factors apply to night ambushes:

a. Ambush weapons should contain a high proportion of automatics. The SMG is not a good weapon for ambush parties since, owing to its poor stopping power, it is unlikely to kill at the first shot.

b. In darkness, all weapons (particularly MGs firing down tracks) should have their left and right arcs of fire fixed by means of sticks to eliminate danger to own troops.

c. The ambush party must never move about. Any movement will be regarded as being insurgents.

d. Clear orders, precise fire-control instructions, clear RVs and signals are essential.

e. Men and groups are to be sited closer together than by day. Control at night is as important.

f. It is difficult to take up an ambush position at night; where possible, therefore, it should be occupied before last light.

43. Night illumination aids. More often than not,

The Rhodesian SAS Combat Manual

a night ambush will depend on artificial illumination. Only in open country with a bright moon and no chance of cloud is it possible to rely on an unilluminated ambush. As a general rule, all night ambushes should be provided with artificial illumination in some form. When ground marker flares are used, care should be taken to site them so that the ambush party suffers from a minimum of glare.

44. Grenade "Necklace". A useful ambush aid is a grenade "necklace". This consists of a series of type 36 grenades with the striker mechanism and base plug removed. They are connected at approximately 12 foot intervals with a length of Cortex. The whole is electrically detonated. Possible uses in ambush of this device are:

- a. Laid as a stop along likely insurgent lines of retreat from an ambush killing ground.
- b. Laid in dead ground difficult to cover by the weapons of the ambush group.
- c. Laid in the likely halting places of the main body of the insurgent party.

45. When used, members of the ambush party should be protected or be outside the lethal area of the grenades. The use of such devices is not limited to night ambushes only.

Section 7 - Wisdom in Retrospect

46. The following are some reasons for failure which have been reported by ambush commanders in Malaya and Kenya. These may help in the training for, and mounting of, ambushes in Rhodesia:

a. "Disclosure of the ambush by the noise made by cocking weapons and moving safety catches or change levers". Check your weapons, practise men in their silent handling and ensure that all weapons are ready to fire.

b. "There was a tendency to shoot high at the light face of the terrorist. This must be corrected on the jungle range".

c. "Disclosure of the ambush position by foot-prints made by the ambush party moving into position and by movement of individuals at the crucial time when the Communist Terrorists were approaching".

d. "There was a lack of fire-control and commanders were unable to stop the firing and start the immediate follow-up".

e. "Commanders were badly sited with consequent lack of control".

f. "There was a lack of all round observation, resulting in terrorists arriving at the area of the ambush unannounced".

g. "There were misfires and stoppages through failure to clean, inspect and test weapons and magazines".

h. "There was a lack of clearly defined drill for opening fire and orders were contradictory".

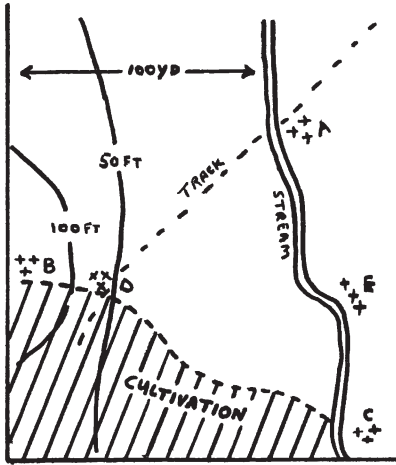
j. "There was a tendency for all to fire at the same target".

k. "Fire was opened prematurely".

The Rhodesian SAS Combat Manual

Annex "A" to Ambushing of Insurgents

AREA AMBUSH

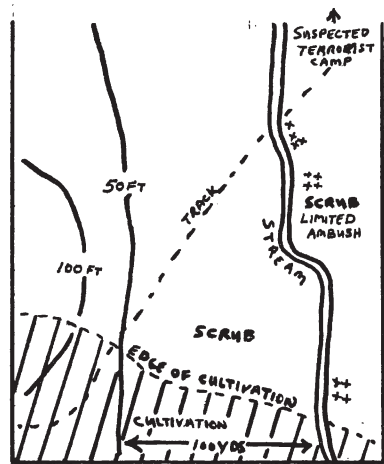


Notes

1. Information received that terrorists will contact sympathisers at or near track junction "D".
2. It is decided that terrorists will probably approach along side of slope. Alternative approaches are "A" to "D", "B" to "D", "C" to "D" or through scrub.
3. Ambush groups are posted at "A", "B", "C", "D" and "E".
4. If terrorists approach from "A" to "D", "A" will allow them to pass through.
5. "D" will probably spring ambush. Terrorists will scatter and may run into "A", "C" (both downhill) or "B". If they hit "A" or "C", they may rebound along stream on to "E".

Annex "B" to Ambushing of Insurgents

LIMITED AMBUSH



Notes

1. A camp is known to be in an area approximately 1,000 yards square.
2. Information has been received that a party of three terrorists will collect subscriptions. The party will approach along the line of the stream. The ambush is therefore sited along this stream.
3. The ambush could be improved by siting the limited ambush as one element of an area ambush thus covering all approaches.

The Rhodesian SAS Combat Manual

Annex "C" to Ambushing of Insurgents

REMEMBER SECURITY
DO NOT USE THE TELEPHONE
DON'T ALLOW MEN OUT AFTER BRIEFING

Ambush Orders - Aide Memoire

Suggested Headings

1. Situation

a. Topography - Use of air photographs, maps and local knowledge, consider use of a guide.

b. Insurgents:

- (1) Expected strength.
- (2) Names and anticipated order of march, photos.
- (3) Dress and weapons of individuals.
- (4) Which is the VIP.
- (5) What are the habits of the party concerned.

c. SF:

- (1) Guides or surrendered insurgents to accompany.
- (2) What other SF are doing.

d. Civilians:

- (1) Locations.
- (2) Habits.

2. Mission. This must be clear in every man's mind, especially when a particular insurgent is to be killed.

3. Execution

a. Type of layout.

b. Position and direction of fire of groups.

c. Dispersal point.

d. Weapons to be carried including special weapons, e.g. shotguns.

e. Composition of groups.

f. Timing and routes.

g. Formations during move in.

h. Orders for springing ambush.

i. Distribution of fire.

j. Use of grenades.

k. Action on ambush being discovered.

l. Order to cease fire.

m. Orders for immediate follow-up.

n. Orders for search.

o. Deliberate follow-up.

p. Signal to call off ambush.

q. Rendezvous.

r. Dogs - if any.

s. Deception plan.

t. Alerting.

4. Administration and Logistics

a. Use of transport to area.

b. Equipment and dress:

- (1) Footwear for move in.

c. Rations - if any.

d. Special equipment:

- (1) Night lighting equipment.
- (2) Cameras.
- (3) Fingerprint equipment.

e. Medical:

- (1) First field dressing, first aid packs and identity discs.
- (2) Medical orderly.
- (3) Stretcher and ambulance.

f. Reliefs.

g. Administrative Area, if required.

h. Transport for return journey.

i. Inspection of personnel and equipment:

- (1) Men with colds not to be taken.
- (2) Is zeroing of weapons correct?
- (3) Is ammunition fresh?
- (4) Are magazines properly filled?

5. Command and Signals.

a. Success signal.

b. Clearance:

- (1) Challenge.
- (2) Password.
- (3) Identification.

Movement by Road

Section 1 - General

1. During an emergency, there is the ever present danger of Security Forces vehicles being ambushed by terrorists. The risk of ambush varies in different parts of the country so a system of road classification and immediate action drills have been evolved to meet the danger. The aim of these ambushes is either to obtain badly needed arms and ammunition, in which case Security Force rather than civilian vehicles are normally ambushed, or the inflicting of casualties may be the main aim in which case the target could be either type of vehicle. In either type of ambush, mines and rocket launchers/recoilless rifles might be used by the insurgents.

2. The insurgent is a master at taking action where he considers that retaliation is not possible. It is therefore necessary for commanders to keep the problem of counter-ambush in mind regardless of how remote may be the possibility of ambush.

Section 2 - Road Classification

3. It has been necessary to introduce a classification of roads in the event of insurgent activity in ambushing convoys and/or vehicles reaching serious proportions. Roads are classified into three main categories. This classification is based on the estimated risk of insurgent action in the area concerned. The road categories are:

a. Unrestricted.

b. Amber.

c. Red.

4. Unrestricted Roads. These are the roads lying within the limits of cities and towns and other roads as decided by the responsible Headquarters. Subject to any particular restrictions which local commanders may wish to impose, military personnel are permitted to travel on these roads unarmed, in uniform or civilian clothes and in any type of vehicle.

5. Amber Roads. Those roads on which there is

considered to be only a very limited risk of insurgent activity. In COIN, most of the roads in Rhodesia would come under this category. The following regulations apply to the movement of military personnel on amber roads:

a. Vehicles may move singly but every vehicle is to carry two armed sentries.

b. Military personnel may travel alone in civilian cars whether in uniform or civilian clothes but must be armed when travelling on duty.

c. Single and unaccompanied motor cyclists on Army machines are not permitted.

6. Red Roads. The regulations applicable to red roads are as follows:

a. All ranks are to be armed when travelling on duty irrespective of the type of vehicle being used.

b. Travel at night (1900 to 0630 hours) is to be restricted to cases of operational necessity.

c. Movement of single military "soft" vehicles is not permitted and the minimum combination of military vehicles should, where possible, be:

(1) Two "soft".

(2) One armoured and one "soft".

(3) One armoured.

d. Every military vehicle is to carry one armed man in addition to the driver.

e. All ranks when not on duty and travelling in civilian clothes in civilian vehicles may travel unarmed.

7. If considered necessary, Red roads may be divided into sub-categories by the formation HQ responsible for the area concerned. Additional precautions to be taken on certain sections of road may be laid down at the same time.

8. Detailed instructions on the road classification scheme and lists of unrestricted, Amber and Red roads in Rhodesia should be included in formation HQ Standing Orders.

The Rhodesian SAS Combat Manual

Section 3 - Military Convoys

9. For the purposes of these instructions, a convoy is defined as a group of two or more vehicles. There are no special regulations concerning the movement of convoys on unrestricted roads.

10. Amber Roads. An armoured vehicle escort is not considered essential. Convoys of up to ten vehicles are to move at normal density (20 to 30 vtm) and in blocks of not more than 5 or 6 vehicles. Non-operational convoys of more than 10 vehicles (i.e., from noncombatant units) will not move without the authority of formation HQ concerned who will make special arrangements for escort if necessary. All convoys of more than 10 vehicles will also move in blocks.

11. Red Roads.

a. Troop convoys of operational units will be primarily responsible for their own protection but the fullest use should be made of available armoured vehicles as escorts.

b. Groups of non-operational vehicles (i.e., ST Platoons on supply runs) will be escorted by armoured vehicles whenever possible.

c. "Soft" vehicles are to move a tactical bound apart, i.e. approximately 150 yards, depending on the type of country. Armoured escort vehicles are to move within this overall density so as to position themselves where they are best able to give protection.

d. Non-operational convoys are not to move without the authority of the formation HQ responsible for the area concerned. They will ensure that adequate arrangements are made for escorts.

12. Particular attention is directed to the convoy density on Red roads as given at paragraph 11c. above, which is applicable to all convoys and to groups of vehicles of less than 5 or 6 vehicles. On this class of road it is important that vehicles move sufficiently close to each other to be able to render mutual assistance in case of emergency, but not so close that an ambush is likely to catch several vehicles. Thus, if two vehicles are moving too close together, insurgent fire will bear on them both and neutralise offensive action from both. If, however, the second vehicle is further back, its occupants may be able to de-bus unmolested and take rapid organised offensive action.

13. Unit Standing Orders for Convoys. Every unit should have comprehensive orders covering movement by road based on the classification system described above. These orders should state clearly who is authorised to put a convoy on the road and should cover in detail the following points:

a. The appointment and duties of convoy and vehicle commanders.

b. The organisation of the convoy.

c. The weapons and ammunition to be carried, Automatic weapons should be included.

d. The state of vehicles, e.g. detailed instructions regarding canopies, tailboards and windscreens.

e. Immediate action drills.

f. Security measures and escorts.

14. Security. It is essential that the movement of convoys should never become a routine matter and that the maximum precautions are taken to prevent the insurgents gaining advance information of vehicle movement. In this connection it should be remembered that:

a. The telephone system is not secure.

b. Wireless messages in clear can be picked up on an ordinary civilian type receiver.

c. The loyalty of civilian employees cannot be guaranteed, although they are subject to screening.

d. Troops tend to be talkative both inside and outside their lines.

15. In short, the fewer people who know about the timing, route and composition of a convoy, the better. Generally, drivers and escorts should be warned as late as possible and the use of alternative routes and other deception measures should not be overlooked.

16. The Convoy Commander. A commander must be detailed for every convoy of vehicles moving by road. This will not necessarily be the senior officer or NCO travelling. The convoy commander will position himself where, according to the circumstances, he can control the convoy. This will not necessarily be in the first or the last vehicle.

The Rhodesian SAS Combat Manual

17. Briefing. Briefing by the convoy commander before moving off must be detailed and explicit. All drivers, vehicle commanders and, if possible, all men travelling in the convoy should be present at the briefing. The briefing should include:

- a. Details of timing, route, speed, order of march, maintenance of contact and action to be taken if contact is broken.
- b. The distribution of men to vehicles.
- c. The distribution of all weapons.
- d. The appointment and duties of vehicle commanders and sentries.
- e. The action to be taken in the event of insurgent attack.
- f. Completion and up to date information about the enemy, particularly his ambushing and fighting habits.

18. Alertness. It must be impressed upon all ranks that a high degree of alertness is essential when moving along routes likely to be ambushed by insurgents. Experience has shown that the idea of having different categories of road under the military classification scheme is not practicable. The policy, therefore, will be to maintain the maximum degree of alertness on all roads other than those classified unrestricted. Every man in the convoy must be ready for instant action at all times.

19. Preparation and Loading of Vehicles. Men travelling in a vehicle must be able to see all round them, fire their weapons or throw their grenades without hindrance and de-bus in quick time - all with the minimum restriction of movement. For this reason, the following points should be noted:

- a. 1-ton or 3-ton vehicles should have canopies and canopy framework removed and tailboards down. Alternatively, canopies can be rolled up to give overhead cover only, but it should be remembered that the canopy framework does restrict the traversing of weapons, throwing of grenades or quick de-busing over the sides of a vehicle.
- b. 14 or 15 are the maximum number of men which can be carried safely in the back of a 3-ton vehicle. If more than this number is carried, men will be unable to use their arms effectively and are likely to become difficult for the vehicle

commander to control in a sudden emergency. Similarly, the number of men carried on other types of vehicles must be restricted to ensure freedom of movement.

c. Terrorists are liable to use mines against convoys and this must continually be borne in mind. Two points should be remembered:

- (1) A ¼-ton vehicle offers no protection against anti-tank mines which would completely destroy this type of vehicle. Where possible, the leading vehicle should be of the 3-ton category.
- (2) All vehicles should be sand bagged. The areas to be covered are the floors of the driving compartment and the areas over the rear wheels. Sand filled maize bags should be used whenever space permits as these provide greater protection than the conventional sandbag.

20. Vehicle Commanders. A commander must be detailed by name for each vehicle. His duties are to ensure that all personnel in his vehicle are constantly on the alert and to assist in maintaining convoy formation by controlling the driver. The primary task of the vehicle commander is to command the troops in his vehicle should the convoy be ambushed. He must, therefore, travel in the back of the vehicle with the troops.

21. Look-out Men. Although there is only one scale of alertness and all personnel travelling in a vehicle must be constantly on the alert and prepared for immediate action, it is obviously not practicable and is an unnecessary strain for everyone in a troop carrying vehicle to be scanning the road the whole time during the journey. In troop carrying vehicles, therefore, four men should be posted as sentries or lookout men. These men should be posted two at the front and two at the rear with arcs of observation covering the 90 degrees from the centre of the road to the side in each direction. Where possible, these sentries should be armed with automatic weapons and grenades. In the event of an ambush, it is their duty to cover with fire from their positions, the evacuation of the vehicle should this be necessary. They can also assist in the control of the convoy by informing the vehicle commander if the next following vehicle halts or drops back.

22. Platoon Weapons. 7.62mm MGs or Bren LMGs on mountings should be distributed throughout the length of a convoy. The 7.62mm MG or Bren LMG on its bipod perched on the top of a vehicle cab is in a very insecure position and the

The Rhodesian SAS Combat Manual

gunner is very likely to be jolted off his feet should the vehicle swerve suddenly or the driver brake unexpectedly.

23. Smoke. The No. 80 Phosphorous Smoke Grenade, besides producing an immediate effective smoke screen, can inflict painful phosphorous burns and can be more useful as an anti-ambush weapon than the "36" grenade.

24. Protection. The HQ concerned with forming a convoy will ensure that the protection available is adequate for the route to be travelled. Where a convoy passes from one district into another, the HQ forming the convoy is responsible for protection measures. It will ensure that protection is available at all times during the journey.

Section 4 - Action On Contact

General

25. Whatever precautions are taken and preparations made, the ambush, when it is sprung, will always be an unexpected encounter. Immediate Action drills are simple courses of action designed to deal with this type of problem. They aim at immediate, positive and offensive action.

26. The insurgent will spring his ambush on ground that he has carefully chosen and converted into a position from which he can kill Security Forces. He will usually fire from above, often at point blank range. The principle behind the Immediate Action drill dealt with in this section is that it is incorrect to halt in the area which the insurgent has chosen as a killing ground and so covered by fire - unless forced to do so. The drill, therefore, is to endeavor to drive on when fired upon, to halt only when through the ambush area or before running into it, and to counterattack immediately from flank or rear.

Immediate Action Techniques

27. The Danger Zone. This is the area in which effective insurgent fire can be brought to bear. In order that the insurgents may not have the advantage of opening fire on ground of their own choosing, every effort must be made to get vehicles clear of the danger zone. When vehicles are fired upon:

a. Drivers are not to stop but are to attempt to drive on out of the danger zone.

b. Sentries are to fire immediately to keep the insurgents down.

c. When vehicles are clear of the danger zone, they are to be stopped to allow their occupants to de-bus and carry out offensive action.

d. Following vehicles approaching the danger zone are not to attempt to run the gauntlet of the ambush but are to halt clear of the area to allow their occupants to take offensive action.

28. Where vehicles have not been able to drive clear of the area under fire, troops are to de-bus under the covering fire of the look-out men, which should include smoke if possible, and are to make for cover on the side of the road. The actual "bailing out drill" is covered in greater detail later on in this section.

Counter Attack

29. Action when no troops have entered the Danger Zone. The convoy commander, or in his absence, the senior vehicle commander present, is to launch an immediate flanking attack on the insurgent position, leaving on the ground as supporting fire such weapons as MGs and mortars.

30. Action when all troops are clear ahead of the Danger Zone. In this case it will be difficult to put in an attack as quickly as in paragraph 29 above because troops will be moving away from the scene of action. Nevertheless, an encircling attack must be mounted as quickly as troops can be marshalled and brought back to a starting point. It is difficult to pre-plan who should take the initiative in these circumstances and it must be made clear at the Convoy Commander's briefing whether the rearmost vehicle commanders are to act on their own initiative in this type of situation.

31. Action when some troops are clear of the Danger Zone and others are halted short of it. With two parties on either side of the ambush, confusion may arise as to which group should put in the attack against the insurgents and time may be wasted in getting the attack under way. If both parties attack at the same time without coordination, an inter-unit clash may result. It is suggested, therefore, that the party which has not yet entered the ambush should make the attack as in paragraph 29 above.

32. Scout Car Tactics. Usually, the best way in

The Rhodesian SAS Combat Manual

which a scout car can assist in counter ambush action is by driving right up to the danger zone to engage the insurgents at close range. In this way it will probably be able to:

- a. Give good covering fire to the flanking attack;
- b. Afford protection to any of our own troops who are caught in the terrorist killing ground.

It is vital to prearrange a signal between the armoured and dismounted troops to stop supporting fire before the actual assault.

33. Command and Control. It is always possible that the convoy commander may be killed or wounded by the insurgents' initial burst of fire. He may be pinned down in the killing ground or be on the wrong side of the danger zone when the ambush is sprung. In order to ensure that there is always a nominated commander on the spot, whatever the situation, it is essential that vehicle commanders understand their responsibilities for organising a counter attack. This should be clearly laid down in unit convoy orders and stressed at the briefing before moving off.

Bailing Out Drill

34. When the vehicle is forced to stop:

- a. The vehicle commander is to shout "De-bus Right" or "Left" to indicate the direction in which

troops are to muster.

- b. Sentries are to throw grenades and open fire immediately on the insurgents' position.
- c. Troops are to de-bus over both sides of the vehicle and run in the direction indicated.
- d. As soon as troops are clear of the vehicle, sentries are to de-bus and join the others.

- e. At this stage of the battle, the aim must be to collect the fit men as a formed body for counter action. Wounded troops must be dealt with after counter action has been taken.

35. Training. This drill must be practised frequently by vehicle loads, e.g. infantry sections and platoons. When miscellaneous vehicle loads are made up before a journey, two or three practices must be held before the convoy departs.

36. Precautionary Tactics. In some areas it may well be advisable for troops moving by road to stop and de-bus before approaching a likely ambush area in their vehicles. They may then move forward on foot to clear the area on either side of the road. If an ambush is in position, the insurgents will probably leave as soon as they see the troops moving in. Nevertheless, if troops are prone to get out of their vehicles and examine likely ambush positions on foot, the fact will soon become known to the insurgents and discourage them from setting ambushes.

Land/Air Operations

Section 1 - General

1. In the event of internal disorder in Rhodesia, the Rhodesian Air Force will be required to support both the Army and the Police. In order to derive maximum benefit from the support that the Air Force can give land forces, it is essential that all persons concerned are fully conversant with the types of support available.

2. If an external threat exists, Close Air Support will be of secondary importance to various forms of Indirect Support such as Counter Air Operations, the latter being needed to establish a favourable air situation. Although close air support provides quick results and raises the morale of troops who see it, its effects are local and the less direct forms of air support will normally be of greater value. Counter air operations of a defensive nature, entailing the interception of aircraft and the employment of ground defence units to protect vital installations and airfields, may be required.

3. Provided that the Air Force is not committed heavily to national defence, such air support as the Army and Police may require in COIN and ISOPS should be available. Requesting agencies should not presuppose nonavailability of air support when it is known that air effort is being used elsewhere.

4. Where enemy air forces are not present, it should be a constant aim to make full use of all of the advantages that stem from the ability to use air power and support without enemy interference.

Forms of Air Support

5. The nature of a COIN or IS campaign is such that the operational value of Air Transport Support is greatly enhanced while the scope of Offensive Air Support operations may be limited. Helicopters and light aircraft are invaluable for many tactical air transport tasks and, as there are never sufficient of them, their use must be effectively controlled.

6. Aircraft in the offensive role will be armed mainly with anti-personnel weapons for use against

groups of enemy whose position is known, but who cannot be seen. Aircraft may also be employed in Air Pin operations where the enemy is pinned down until the ground cordon has been completed. Machine guns and small fragmentation bombs are likely to be used more frequently than heavy high explosive bombs or napalm. Rocket projectiles may also be used against targets that demand greater accuracy and hitting power.

7. Aircraft can be usefully employed for special tasks such as the dissemination of propaganda, liaison flights and the protection of convoys.

8. Air reconnaissance is a valuable form of air support in operations against terrorists, particularly in remote parts of the country where it will sometimes be the only reliable source of intelligence. Air reconnaissance secures a manifest advantage over enemy forces that are tied to movement on the ground.

9. A list of Air Force roles and capabilities is given in Annex "B" to this chapter.

Section 2 - Air Transport Operations

General

10. Within a theatre, tactical air transport operations give troops increased tactical mobility and allow a commander greater flexibility in the use of his forces. They may include any of the following types of operations:

a. **Airborne Operations.** Airborne operations enable a combat force and its logistic support to move by air into an area of operations. In air landing operations, the force is landed from fixed wing aircraft or from helicopters. In an airborne assault the force is delivered by parachute.

b. **Air Maintenance.** Air maintenance includes air supply, the movement of personnel, the evacuation of casualties and prisoners and the back loading of equipment. It enables ground forces to operate in remote or inaccessible areas and reduces the need for a vulnerable land line of supply which must be guarded. Troops become able to move with lighter

The Rhodesian SAS Combat Manual

scales of equipment and they can be used with greater flexibility, since their movements are not so restricted by logistic limitations. The rapid evacuation of casualties, especially from remote places, reduces manpower wastages and raises the morale of the forces on the ground. Certain aspects of air maintenance are likely also to be of use to the Civil Administration.

c. Liaison and Courier Flights. Liaison and courier flights enable commanders and, occasionally, government officials, to keep in close touch with operations and civil affairs respectively.

Local Considerations

11. The resources of both aircraft and equipment are limited and any air supply to Rhodesian land forces will have to be restricted to essentials. The problem is complicated when units of the Air Force are widely dispersed. In this case, the movement of fuel, ammunition and stores for aircraft may put a heavy load on the transport fleet, although such items will be road transported where possible. In times of emergency, the transport fleet could be augmented by chartered civil aircraft.

12. The payload of an aircraft is dependent upon the distance to be flown and decreases with an increase in the distance. Details of payload available for a particular operation will be advised when the operation is planned.

13. As certain areas of Rhodesia are not well served with airfields capable of taking a fully loaded Dakota, it may be necessary to convey troops a considerable distance from a suitable airstrip to the forward area. This will normally be effected by motor transport. Where such transport is not available, or roads do not exist, helicopters or light transport aircraft could be employed.

Essential Requirements for Air Transport Ops

14. The essential requirements for successful air transported operations are:

- a. Coordinated planning by both ground and air staffs.
- b. Joint Service organisation of dispatching and receiving airfields.

c. Clear and comprehensive allocation of responsibilities to each Service.

d. Detailed and accurate documentation.

e. Organisation and equipment of land force units to be moved on an "air portable" basis.

f. Planned loading of aircraft.

g. A high standard of training in air movement and good air movement discipline within units.

Advantages and Disadvantages of Various Forms of Air Supply

15. Landing by Fixed Wing Aircraft. The landing of payloads by fixed wing aircraft is the most efficient and economical method of air supply. The advantages and disadvantages are:

a. Advantages.

- (1) No loss of payload of parachutes and the associated special packing required for air drop.
- (2) Aircraft can carry loads on the return journey.
- (3) No special training of aircrews is necessary.
- (4) Ease of loading.

b. Disadvantages.

- (1) Forward airfields required.
- (2) Specialist organisation required on forward airfields.
- (3) Payload may be limited by all-up landing weight restrictions dictated by airfield conditions.
- (4) A road transport organisation may be required to lift supplies to forward troops.

16. Air Drop. Air dropping should normally take place where landing is not possible. The advantages and disadvantages are:

a. Advantages.

- (1) Supplies can be dropped practically anywhere and at almost any time.
- (2) No special organisation is required in forward areas, provided troops have been trained in preparing for and receiving an air drop.

b. Disadvantages.

- (1) A percentage of payload is sacrificed to parachutes, packing material, dispatching crew and machinery. This is partly offset by the elimination of all-up landing weight restrictions.

The Rhodesian SAS Combat Manual

(2) The specialist base organisation must hold special containers and parachutes and requires trained packers.

(3) Trained Air Dispatch crews are needed.

(4) Stores may land dispersed and may be difficult to collect. A wastage percentage must be precalculated.

(5) Recovery of parachutes and containers, unless of the disposable variety, is usually delayed and, as a result, may restrict later air drops.

17. Free Dropping. Certain unbreakable stores, e.g. clothing and grain, may be dropped free, i.e. without parachutes. The limiting factor is the amount of packing required.

18. Tactical Supply by Helicopters. The helicopter is only economical when used as a vehicle for tactical supply over very short distances. Freight may be loaded either internally or underneath in a cargo net. (Note that the Alouette 3 helicopter is not capable of lifting a full cabin and full sling load at once). The merits of supply by helicopters are:

a. Advantages.

(1) Supplies can be taken to any forward area.

(2) Casualties can be flown out on the return flight.

(3) Bulky loads can be transported in cargo sling.

(4) Returnable or salvaged articles can be flown out on return flights.

(5) Very little special packing is required and stores may be delivered to individual forward units.

b. Disadvantages.

(1) The helicopter's payload is limited.

(2) The helicopter is slow and has only a limited range. Its flexibility is consequently limited, i.e. it cannot be switched rapidly from one area to another.

Section 3 - Offensive Air Support

General

19. In ISOPS, all offensive air action must be based on the principle of minimum force. With aircraft this becomes a problem as their weapons generally have a large zone of dispersion and are not normally capable of firing single aimed shots. In order to retain the support of the people, the use of very destructive lethal weapons must be carefully controlled.

Close Air Support

20. Principles. The aim of close air support is to bring air delivered fire support to the assistance of land forces at the right place and without danger to friendly forces. The detailed integration of close air support missions with the fire and movement of friendly land forces is ensured by:

a. The fact that requests for close air support are originated by a competent Army authority.

b. The collective action of JOCs.

21. Ground Air Controller (GAC). See Annex "E" to this chapter.

22. Target Indication. There may be a need for accurate target indication. Some aids are: smoke, ground signals and landmarks.

23. Ground or Airborne Alert. Ground or airborne alert may be necessary to ensure the required rapid response. These methods, however, are uneconomical and could tie up air effort which could more effectively be employed elsewhere.

24. COIN Ops. Close air support in the form of air strikes on gangs of terrorists that are on the move are seldom fully successful because of the difficulties of directing aircraft quickly onto fleeting targets. When terrorists are in camps or hides that have been accurately located, air strikes can be most effective. Close air support should not be used against targets which are capable of being neutralized by ground weapons.

a. Needless demands in one sector may inhibit calls from another sector where adequate surface-to-surface weapons are not available.

b. Surface-to-surface weapons may be able to deal with targets more effectively and are invariably more economical than air-delivered weapons.

c. Surface-to-surface weapons support may be more timely.

Close air support, however, could be the better and sometimes the only method of dealing effectively with targets, as may apply in the following circumstances:

d. When surface-to-surface weapons are out of

The Rhodesian SAS Combat Manual

range or are unable to produce the desired concentration of fire.

e. When a target is likely to move before it can be effectively engaged by surface-to-surface weapons; that is, before observed fire may be brought to bear.

f. When adequate support by surface-to-surface weapons is impracticable. This may occur in mountainous or thickly wooded country, or in the early stages of operations, before suitable surface-to-surface weapons arrive.

Close air support is limited mainly by:

g. Bad visibility.

h. The difficulty of illuminating targets at night.

i. The tactics required to deliver the weapons accurately when an aircraft is exposed to ground fire.

j. The difficulty of sustaining support as opposed to artillery.

Interdiction

25. Interdiction attacks against terrorist camps, hides and supply routes may be necessary to disrupt terrorist communications and harass gangs so that they move into areas where they can be effectively engaged by ground troops. This form of attack is not an efficient or economical way of killing the enemy, although it may adversely affect their morale. Haphazard harassing attacks will not be authorised and care must be taken to avoid inflicting casualties on civilians, even though they may be active supporters of the terrorists.

Air Proscription

26. Air proscription missions may be helpful in denying terrorists the use of areas that have been declared prohibited.

Non-Lethal Weapons

27. Support with non-lethal weapons such as tear gas and irritant smoke may occasionally be useful for dispersing hostile assemblies.

Section 4 - Air Reconnaissance

General

28. Air reconnaissance, for the purpose of this chapter, is separated into two categories, photographic and visual reconnaissance. Aircraft engaged in these roles may be armed in order to take advantage of opportunity targets. Indirectly, reconnaissance helps to restrict the enemy's freedom of movement. It may provide warning of interference to lines of communication and remote installations.

Photographic Reconnaissance

29. Photographic reconnaissance (PR) provides intelligence and gives information on many types of targets of interest to both land and air forces. PR is carried out mainly by specially equipped aircraft which are able to take both vertical and oblique photographs as needed. In order to obtain the maximum information from PR, the requirements must be clearly stated so that the correct aircraft, height, time and frequency of cover may be selected. Photographs must be ready by trained photographic interpreters. An extension of PR is to make up maps from mosaic vertical photographs.

Visual Reconnaissance

30. Owing to possible adverse weather conditions, the urgency of reconnaissance information and the vulnerability of PR aircraft, greater emphasis is often placed on visual reconnaissance as a method of obtaining observation at low level by day. Among the many valuable uses of visual reconnaissance are the abilities for:

a. Searches and patrols of many kinds to be made.

b. Reports from other sources to be verified.

c. Commanders to examine areas over which they may have to operate on the ground.

Section 5 - Organisation and Procedures

General

31. The standard procedures as described here should, wherever possible, be strictly observed. Planning must be coordinated within and between Services in order to avoid duplication, conflict and delay. Great care must be taken if any deviations or shortcuts from routine channels are contemplated if confusion is to be avoided.

The Rhodesian SAS Combat Manual

Signal Messages

32. The signal message procedure for employing air support are to be in accordance with the Control and Reporting System of the Air Force.

33. Requests. Whether a request for air support is of an immediate or preplanned nature, the procedure remains the same. Requests for air support may originate from any Army, BSAP or Air Force unit. If the unit making the request is under the command of a JOC, such request will be passed through normal channels to the JOC. The Air representative may then action the request or if the request refers to air effort which has not been allocated to him the request is forwarded to a Superior Joint Headquarters.

An Air Request may be in the form of offensive, transport or reconnaissance support. The precedence given to an air request message should be consistent with the priority of the requirement. Rapid processing of Air Requests may permit aircraft already airborne to be tasked to satisfy immediate requirements.

34. Acceptance and Refusal. In response to an Air Request, a message of acceptance or refusal should always be dispatched through normal channels to the requesting agency. If a request is refused, the reason must always be given.

35. Air Tasks. If the request is accepted, the mission will be Air Tasked by the JOC or the authority concerned. The control of jet ground attack, jet bombing effort, country wide transport support and photographic reconnaissance will normally be retained by Air Force HQ.

36. Time Over Target (TOT). The Air Task will be acknowledged by the main base or forward airfield by means of a TOT message.

37. In-Flight Messages and Message Changes. During a mission, in-flight briefings may take place, e.g. by the FAC directing an attack or the tasking agency notifying the details of an Air Task. Any of the standard messages may, in fact, be passed from a ground position to an aircraft should the necessity arise. Information amending that already passed may be notified to aircraft or ground stations in the form of a Message Change.

38. Mission Report. After the mission has been carried out, the results will be reported immediately

as the aircraft passes over the ground unit concerned but a full Mission Report will also be prepared and dispatched by an intelligence officer after the mission has been debriefed.

Use of Maps

39. When air forces are operating in the target area in close support operations they will use the grid system prescribed for the area concerned and, where possible, both ground and air forces will use the same scaled maps of the target area. In Rhodesia, except in special circumstances, when the UTM grid reference is passed to an aircraft or Air Force unit, it is to be prefixed by the reference letters and must be taken to six figures.

Air Transport Support

40. Coordination. The coordination of all air-transported operations when the Army is involved will be done by Army HQ and Air Force HQ and when the police only are involved between Air Force HQ and GHQ BSAP.

41. Division of Responsibilities. The division of responsibilities between the land and air forces are:

a. Land Forces.

- (1) Movement of troops and store to transit areas near airfields.
- (2) Calculation and detailed preparation of loading tables and flight manifests.
- (3) Preparation in conjunction with the Air Force of an air movement table.
- (4) Coordination of traffic control arrangements with the Air Force movement staff at airfields.
- (5) In conjunction with Air Force movement staff, the calling forward of troops to the airfield.
- (6) Physical loading and unloading, lashing and unlashng of loads in aircraft under Air Force supervision.

b. Air Force

- (1) Provision of aircraft at airfields at times called for by the land forces and/or police air plan.
- (2) Provision of equipment required on the airfield for loading and unloading aircraft.
- (3) Advice to land force units in the preparation of loading tables when required.
- (4) All movement on the airfield and coordination with the land forces on traffic control to airfields.
- (5) Preparation, in conjunction with land forces, or air movement table.
- (6) Supervision of loading and unloading of

The Rhodesian SAS Combat Manual

aircraft by ground force personnel.

(7) Provision of lashing gear for securing loads in aircraft.

(8) Adherence to the flight plan.

42. Land Force Organisation at Airfields.

a. Emplaning Airfield. When an air transportation operation is contemplated, an Air Transport Liaison Officer (ATLO) from the land forces will be appointed and attached to the Air Force at the emplaning airfield.

b. Deplaning Airfield. If the number deplaning at any one time does not exceed 150, no special staff is required at the deplaning airfield. These duties will be undertaken by a deplaning officer nominated by the unit being air transported. He will travel in the leading aircraft but should not be the stick commander. If numbers exceed 150, or more particularly if a large scale freighting operation is undertaken, special staffs will normally be fulfilled by a deplaning team nominated by the unit being transported. The team will travel in the leading aircraft. The stick commander should not be a member of the team.

43. Unit Organisation and Equipment.

a. As units being employed on internal security duties may often have to move by air at short notice, it is essential that the transport plan be kept simple and as much pre-operational planning as possible be done. A Unit Staff Table should be compiled and adhered to by all units being air transported.

b. 240 pounds have been allowed for the soldier/policeman in Field Service Marching Order. This includes one day's ration on the man and a kit bag or haversack weighing 30 pounds.

44. Action by Troops being Air Transported.

This section summarises the action to be taken by a unit or sub unit ordered to carry out a tactical air move. It is set out in chronological sequence:

a. Action to be taken in normal location.

b. Move to the airfield.

c. Emplaning and air movement.

d. Action at forward airfield.

45. Action in Normal Location.

a. Planning.

(1) The limitations of transport aircraft and the fact that there are only a very limited number available will mean that, in addition to the weight restrictions on the individual, companies will have to move with a reduced scale of equipment and vehicles and without many of their administrative personnel.

(2) The initial warning order or the instructions for an air move will contain the following:

(a) Emplaning and deplaning airfields.

(b) Number of aircraft allotted and pay loads, hence the number of lifts.

(c) Estimated time of emplaning.

(d) Any alteration to standard loading tables.

(3) In his preparation and planning for the air move, the unit commander will include:

(a) The checking of unit staff tables with the scales of equipment, weapons and vehicles on which the unit will move.

(b) Documentation for the air move.

b. Unit Specialists Required.

(1) The detailed staff work involved in an air move is normally beyond the capacity of the adjutant and requires specialist training. A unit emplaning officer should be appointed by all Regular and TF infantry battalions and when a particular unit is ordered to provide a company for air transportation, he should be struck off all other duties.

(2) Once orders for an air move are received, the unit emplaning officer will need a warrant officer or senior NCO as his assistant. A full time junior officer or senior NCO should be appointed with similar responsibilities in each sub unit.

c. Documentation.

(1) The documentation necessary will be prepared in the normal location so that only the last minute adjustments need be made in the transit area on the airfield. The forms involved are:

(a) Unit Staff Tables.

(b) The Air Movement Table

(c) The Air Loading Table

(d) The Flight Manifest

(2) Unit Staff Tables. These consist of a statement of the number of men per sub unit and the equipment to be carried by them. From these tables may be calculated the number of aircraft required to lift each sub unit.

(3) Air Movement Table. The air movement table will normally be prepared by Army HQ or, if the Police only are involved, by HQ RAF in consult-

The Rhodesian SAS Combat Manual

ation with the Police. It shows the allotment of aircraft to units, the take-off and landing airfields, priorities and times of take-off and landing.

(4) Air Loading Table. This form is made out by the unit after receipt of the Air Movement Table. It is a summary of the unit's aircraft loads for the move, and shows the details of take-off and landing.

(5) Flight Manifest. This is to be completed by unit or sub unit HQ for every aircraft load. It is an accurate record of everything in the aircraft load and how it is lashed. Six copies are required; one for the unit, one for the captain of the aircraft who checks and signs it, one for the ATLO who collects it shortly before take-off, one for the senior passenger, one for Army HQ or GHQ BSAP and one for records.

46. The Move to the Airfield.

a. Loading of Vehicles and Equipment.

(1) Arrangements should be made to load vehicles and other heavy equipment the day before take-off, if possible, because of the time necessary to load and lash them. This requires liaison with the Air Force and will be arranged by the ATLO.

(2) The necessary lashing gear and loading ramps will have been calculated from the air loading table and are supplied by the Air Force. The ATLO is responsible for supervising their arrival at each aircraft.

b. Movement to Airfield.

(1) Each lorry should carry a load for one aircraft only and be marked (with chalk) the number corresponding to that on the aircraft.

(2) At the airfield entrance, the ATLO will establish a check point with guides to take lorries to their correct loading or emplaning areas. The unit being air transported will provide the ATLO with NCOs as guides.

(3) The airfield will be clearly sign posted by the ATLO. Traffic control and discipline are important and the unit's Regimental Police are to assist the ATLO.

(4) If the unit or sub unit is being moved in more than one lift, troops will remain in their normal location until called forward by the ATLO.

c. Emplaning and Airmovement.

(1) Airfield Organisation. The ATLO will establish a report centre, close to air traffic control and all last minute difficulties should be referred there. The report centre is also the control centre

of the operation on the airfield and is in touch with all sections of the airfield. The commanding officer/company commander or his representative should remain at the report centre until take-off time in order that he may deal with any hitches that may occur.

(2) When the unit has emplaned, the ATLO staff will collect from the stick commander in each aircraft one copy of the flight manifest. This must be up to date and accurate as it is the only Army/Police record of the load of that particular aircraft.

(3) Returning Aircraft. If an aircraft turns back for any reason and lands its load on the base airfield, the ATLO will arrange to send the load forward again in another lift and to evacuate any casualties. To assist in this and to supervise his units emplaning properly, the unit emplaning officer will fly in the last sortie of the unit.

47. Action at the Forward Airfield. The quicker a unit deplanes and clears the runways, the faster will be the turnaround of aircraft. A well understood plan for movement to unit or sub unit rendezvous is essential, so that the unit is ready for action as soon as possible. Rendezvous should be well clear of the airfield to avoid cluttering it.

48. Supply Organisation. Conventional lines of communication and methods of supply will be used as far as possible, but air supply whether supplementary to, or replacing land communications, requires an organisation to receive demands and, in conjunction with the Air Force, to prepare and dispatch the items required. The organisation is as follows:

a. Army HQ or Police HQ (in conjunction with Air Force HQ) will implement the overall air supply plan and ensure that adequate stocks are held at the Rear Airfield Supply Organisation or are immediately available.

b. The Rear Airfield Supply Organisation (RASO). Owing to the limited resources of trained dispatchers, parachutes and harnesses, supply dropping operations will be controlled by a single RASO, normally based at New Sarum.

49. Recovery of Air Dispatch Equipment.

a. Except where necessary for the protection of the stores to be dropped, all air dispatched stores will be packed in wooden shook, or similar type boxes. These boxes, if the operational situation demands, may be treated as expendable and

The Rhodesian SAS Combat Manual

destroyed. Every effort should, however, be made to recover them.

b. Parachutes and harness are in short supply, difficult to obtain and expensive. With the exception of the disposable variety, parachutes are never to be abandoned, damaged or destroyed unless operational conditions render recovery impossible. Units must ensure that such equipment is carefully packed and returned to the nearest RhASC unit as soon as possible. A receipt should be obtained.

50. Aero-Medical Organisation. Army Headquarters are responsible for providing the aero-medical facilities necessary for the air evacuation of casualties, except in the case of some of the Air Force aircraft where specially designed stretchers are a part of the aircraft's equipment.

51. Casualty Evacuation by Air. See Annex "G" to this chapter.

52. Documentation and Accounting. All documents are to be prepared by the requesting agency in the normal location so that only last minute adjustments need be made in the transit area or on the airfield. The forms involved are Unit Staff Tables and Flight Manifests. The system of accounting is as laid down in "Regulations for the Equipment of the Army - Part II - Accounting".

53. Carriage of Special Freight. The properties inherent in certain materials render them dangerous and the possibility of causing injury to persons, or damage to aircraft and cargo, affects the conditions under which they may be carried by air.

54. In-Flight Procedures. Inside an aircraft, regardless of rank, the captain is in sole command. His orders are to be obeyed at once, since the safety of the aircraft is his responsibility. Good discipline in the air is as important as anywhere else. Land force personnel will be briefed on:

- a. Emergency drills.
 - b. Strapping-in at take-off and landing.
 - c. Moving about the aircraft.
 - d. Smoking.
 - a. Use of the toilet.
55. Laying-Out and marking a Dropping Zone.

The instructions for laying out and marking a dropping zone (DZ) for both day and night operations are to be found in Annex "C" to this chapter.

56. Helicopter Operations. See Annex "D".

Offensive Support.

57. Certain effects of air action may be unacceptable to ground forces. For instance, craters or rubble may restrict the mobility of friendly forces moving into or through the area. Where applicable therefore, requests for offensive air support should specify unacceptable effects.

58. Forward Line Own Troops (FLOT). The position of friendly troops relative to aircraft operating in support must be given in a FLOT message.

59. Safety Distances for Various Weapons. Safety distances for various weapons are given in Annex "E" to this chapter.

60. VHF Becker Homings. Standing Operating Procedures for carrying out Becker Homings are given in Annex "F" to this chapter.

Reconnaissance.

61. It is incumbent upon the joint agencies concerned with reconnaissance operations to ensure that reconnaissance tasks are not needlessly duplicated and that the reconnaissance effort of all forces is coordinated and used to best advantage. It is important that reconnaissance performed is not wasted by poor or tardy dissemination of information. The results of any reconnaissance sortie will be watched, particularly in the early stages of interpretation not only for the information required by the sponsor, but also for incidental information which may be of value to any other Service commander.

62. The Joint Photographic Interpretation Staff (JPIS). The JPIS is located at Air Force HQ and is charged with the responsibility of providing intelligence information from the results of air reconnaissance. The tasks of the Staff are:

- a. To provide target intelligence.
- b. To carry out all phases of photographic interpretation.

63. Photographic Reconnaissance. Commanders

The Rhodesian SAS Combat Manual

in the field should follow two principles when requesting photography:

a. The smaller the area to be covered by photography and the smaller the scale, the sooner the task can be completed.

b. Loose contact prints can be produced quickly and easily, while enlargements and mosaics require a disproportionately longer time in production. Mosaics should only be requested in exceptional circumstances, e.g. when no other presentation of photography is acceptable. Even then, the quantity required should be kept to a minimum.

64. Requests for photo reconnaissance are submitted in the same manner as other requests for air support.

65. Processing. The processing of films and the reproduction of prints is the responsibility of the Rhodesian Air Force.

66. Photographic Interpretation. To obtain maximum information from PR, photographs must be read by trained photographic interpreters. This produces a limitation in time, for the amount of detail required will determine the amount of time necessary to obtain it. Care must, therefore, be taken to ensure that the right amount of detail is requested, so that it arrives back at the requesting authority in time for action to be taken. Photographic interpretation is the responsibility of the user Service, although this task will normally be carried out by JPIS.

The Rhodesian SAS Combat Manual

Annex "A" to Land/Air Operations

Definitions

1. **Air Drops.** The unloading of personnel or material from aircraft in flight.
2. **Air Maintenance.** Logistic support for troops deployed in a zone of operations. This includes air supply, movement of personnel, evacuation of casualties and prisoners of war and recovery of equipment and vehicles.
3. **Air Proscription.** The use of air power in an area proscribed by law as a prohibited area and in which any person, livestock or property is subject to attack.
4. **Air Reconnaissance.** The acquisition of intelligence information by employing aerial vehicles in visual observation or the use of sensory devices.
5. **Air Support.** Any form of support given by air forces to forces on land or sea, including:
 - a. **Close Air Support.** Air action against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces.
 - b. **Immediate Air Support.** Air support designed to meet specific requests which arise during the course of battle and cannot be planned in advance.
 - c. **Indirect Air Support.** Support given to land or sea forces by air action against objectives other than enemy forces engaged in the tactical battle. It includes the gaining and maintaining of a favourable air situation, interdiction and harassment.
 - d. **Preplanned Air Support.** Air support in accordance with a program planned in advance of ops.
 - e. **Tactical Air Support.** Air operations carried out in coordination with surface forces which directly assist the land or naval battle.
6. **Armed Reconnaissance.** An air mission flown with the primary purpose of locating and attacking targets of opportunity, i.e. enemy material, personnel and facilities in assigned general areas or along assigned ground communication routes, and not for the purpose of attacking specific briefed targets.
7. **Counter Air Operations.** Operations designed to gain and maintain a favourable air situation to the degree that enemy air forces are prevented from interfering effectively with our operations.
8. **Full Command.** The military authority and responsibility of a superior officer to issue orders to subordinates and covers every aspect of military operations and administration.
9. **Ground and Airborne Alert.** Aircraft which have been alerted and are ready to be used operationally, either on the ground or in the air should the need arise.
10. **Interdiction.** Planned operations aimed at destroying or neutralizing the enemy's military potential and disrupting the movement of his forces into, out of, and within the battle area.
11. **Offensive Air Support.** All forms of air support not covered by tactical air transport, e.g. air protection, ground attack and reconnaissance.
12. **Operational Command.** The authority granted to a commander to assign missions or tasks to subordinate commanders, to deploy units, to reassign forces and to retain or delegate operational control as necessary. It does not, of itself, include administrative command or logistic responsibility.
13. **Operational Control.** The authority granted to a commander to direct forces assigned so that he may accomplish specific missions or tasks which are usually limited by function, time or location; to deploy units concerned and to retain or assign operational control of those units. It does not include authority to assign separate employment of components of the units concerned. Neither does it include administrative or logistic control.
14. **Tactical Air Transport.** The use of air transport in direct support of:
 - a. **Airborne Assaults.**
 - b. **Carriage of air transported forces.**
 - c. **Tactical air supply.**
 - d. **Evacuation of casualties from forward airfields.**
 - e. **Clandestine operations.**

The Rhodesian SAS Combat Manual

Annex "B" to Land/Air Operations

Air Force Roles and Capabilities

1. Role.

a. Day Fighter/Ground Attack: Vampire (No.2), Hunter (No.1)

b. Light Bomber: Canberra (No.5)

c. Photographic Recon.: Canberra, Hunter

d. Air Transport: Dakota (No.3)

e. Light Ground Support: Trojan (No.4)

f. Vertical Support: Alouette (No.7)

2. Variety of Capabilities Available for Air Support within the above Roles.

a. Area bombing day/night (General purpose, impact or delay fused. Anti-personnel).

b. Day Precision Bombing (General purpose, impact or delay fused. Anti-personnel).

c. High explosive and semi-armour piercing cannon

d. Machine Gun

e. Armour piercing and GP rocket projectile

f. Napalm

g. Tear gas

h. Target marking

i. Specialist PR, including map mosaics

j. Simple hand held camera, including fast processing (Polaroid)

k. Visual reconnaissance

l. Airborne operations (Air land and air drop)

m. Air maintenance (Air land and air drop)

n. Air observation or control post

o. Search and rescue

p. Casualty evacuation (Casevac)

q. Night illumination

r. Airborne crane

s. Propaganda dissemination (Leaflets and loudhailer)

t. Radio relay

u. Liaison flights

The Rhodesian SAS Combat Manual

Annex "C" to Land/Air Operations

Requirement for and Marking of Dropping Zone

Definition

1. A dropping zone (DZ) is a specified area upon which airborne troops, equipment and/or supplies are dropped.

General Requirements

2. In airborne assault and air supply operations, the selection of the DZ should, as far as possible, be chosen to meet the ground force requirements. There are several other factors which must, however, be considered:

a. Ground Requirements.

- (1) The DZ should be as close as possible to where the supplies and/or troops are needed.
- (2) The surface and the approaches should be firm and clear of obstacles to allow free movement of vehicles.
- (3) The surrounding area should be reasonably clear so stray drops can be recovered.
- (4) Undergrowth should be short enough to ensure that stores will not be lost in it.

b. Air Requirements.

- (1) The DZ length will vary with the load to be dropped.
- (2) The DZ should be near a prominent landmark or easily located from the air.
- (3) The approach and departure routes to and from the DZ should be free from enemy ground fire and from terrain hazards such as high ground, tall radio masts, etc. If possible, these routes should be so arranged that pilots do not have to fly into the sun.

3. The ground and air requirements often conflict and their resolution is a joint responsibility. The Air Force is, however, responsible for the delivery and therefore makes the final decision on suitability of the DZ in terms of air safety and navigation factors. Ground force officers selecting DZs must, therefore, have a thorough knowledge of the characteristics of the aircraft being used and the associated delivery equipment.

4. Essential Information. Before reaching the DZ the aircrews will need to know:

1. The grid reference of the impact point.

b. The true bearing of the axis of the DZ and the approach.

- c. The wind speed and direction at the DZ.

5. The information in 4a and 4b should, if possible, be included in the request. If this is not possible, last minute information on ground wind speed and direction can be transmitted to the aircraft by radio. Alternatively, a small smudge fire, by day, may assist the pilot in assessing wind speed and direction. When the DZ is in the bed of a river, the smudge fire should be placed on the bank above the DZ to avoid the possibility of a false wind indication.

6. Visual Marking. Personnel will conform to the visual marking listed in Appendix 1 to this Annex. Markings are to be made with minimum deviations as dictated by local conditions. Visual markings will normally be:

a. By Day. Identification panels or local material which contrasts with the surrounding terrain.

b. By Night. Lamps, torches, flares or any other available means of illumination.

Identification letters should be formed of the minimum number of strips/lights that will ensure positive identification.

7. Ground Signals. The signals to be used for postponing or cancelling drops are shown in App. 1.

If there is any doubt as to whether the DZ is an enemy decoy or the real one, but in enemy hands, a simple recognition signal will be required so that the pilot can verify the situation. Radio communication with the aircraft is usually the best method, but an alternative means of communication, such as Very light signal must also be arranged.

8. DZ Recognition Aids. Depending on the tactical situation, the following additional aids to the recognition of a DZ from the air may be displayed in the vicinity of the code identifier:

a. Flares.

b. Very lights.

c. Chemical smoke.

d. Tethered balloon markers (in close country).

The Rhodesian SAS Combat Manual

e. Flashing mirrors (especially useful in featureless terrain).

f. Aldis lamps.

9. Size of the Stick to be Dropped. Each paratrooper requires 50 yards in which to be dropped. There must be an area of 150 yards on the undershoot and also 150 yards in the overshoot area. Therefore, if only one man will be dropped, he will require:

50 yards per man

150 yards undershoot

150 yards overshoot

350 yards will be the minimum length of the DZ when only one man is being dropped. Area required for 20 paratroopers, the maximum amount carried in a Dakota aircraft, will be:

1000 yards (20 men x 50 yards per man)

150 yards overshoot

150 yards undershoot

1300 yards is the minimum length of the DZ

10. Resupply and Freedrop. For parachute resupply and free drop the aircraft flies lower; at 500 feet for resupply and 300 feet for free drop. Therefore, a smaller DZ can be used, one about the

size of a football field being all that is required. It is necessary for the DZ to be cleared of trees, especially for the free drop. The only marking required on the DZ is the identification of the DZ. Smoke is essential to the pilot in judging his release point.

11. Night Parachute Resupply from 1000 ft. AGL. It is considered necessary that the minimum dimensions of the DZ be 500 yards by 200 yards because the supplies being dropped at a higher altitude than for daylight operations are subject to wind forces for a greater length of time and, therefore, may drift a greater distance.

12. If it is possible for the ground party to estimate wind strength, estimated drift can be worked out using the following information as an approximation; a package will drift 130 yards for every 5 mph of wind strength.

13. Ground Party Responsibilities.

a. Select suitable DZ.

b. Estimate wind strength and calculate expected drift.

c. After calculating drift, select aiming point. (See diagram at appendix 3).

d. Use flashlight to indicate aiming point.

The Rhodesian SAS Combat Manual

Appendix 1 to Annex "C"

Standard Markings and Ground Signals on DZs

1. These should include:

a. Code letter, unit identifier; illustrated for day and night.

b. Followed by ground signals for:

(1) Clear to drop

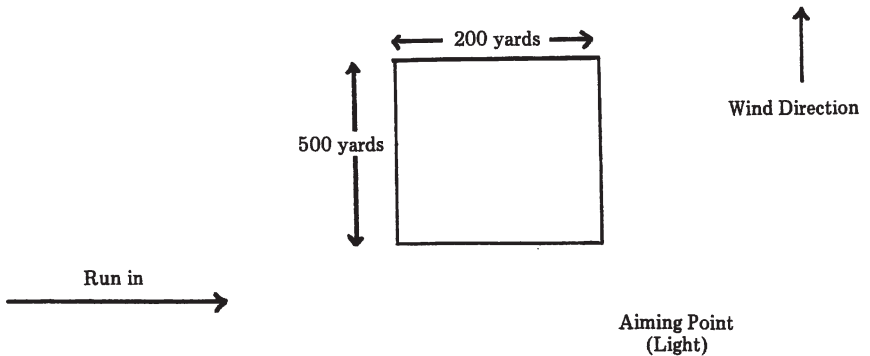
(2) Drop postponed

(3) Drop cancelled

2. Code letter to be positioned at the dropping point position of unit identifier, limit markers (if necessary) or smoke (posn).

Appendix 3 to Annex "C"

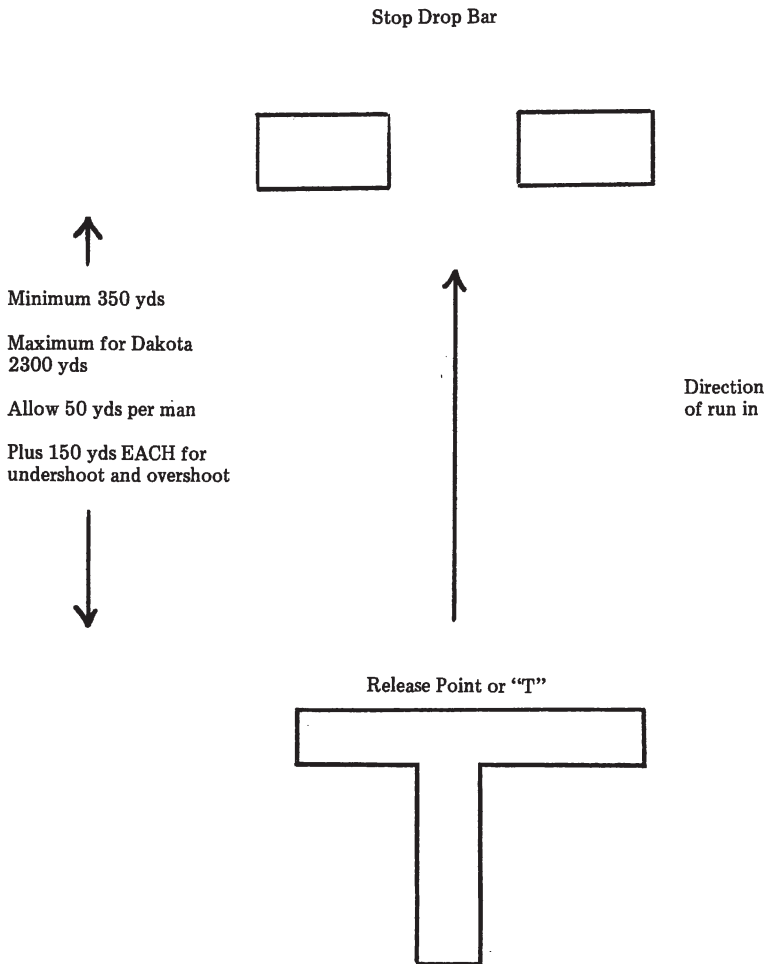
Layout of DZ for Para Resupply from 100 foot AGL at Night



The Rhodesian SAS Combat Manual

Appendix 2 to Annex "C"

DZ Signals for Paratrooping



The Rhodesian SAS Combat Manual

Annex "D" to Land/Air Operations

Helicopter Operations

1. The following appendices detail the standing operating procedures for helicopter operations:

- a. Trooping: Appendix 1
- b. Casevac: Appendix 2
- c. Landing Zone Requirements: Appendix 3
- d. Tactical Move of 81mm Mortar and Crew by Helicopter: Appendix 4
- e. Safety Distances with Helicopter MAG Support: Appendix 5

Appendix 1 to Annex "D"

Trooping

Danger Areas

1. Several areas inside and around the Alouette III are potentially dangerous to personnel either directly or indirectly, e.g. if interference is caused to the aircraft's controls. These areas are:

a. Main Rotor. The main rotor of the Alouette III is some 36 feet in diameter. When the aircraft is parked on level ground with the rotor turning, the main rotor is about 8-9 feet above the ground (see Figure 1). In conditions of high or gusty wind, the rotor disc is tilted into the wind and this can bring the tip of the rotor to within 4-5 feet of the ground. Sloping ground also has the effect of varying the height of the rotor as seen in Figure 2.

NOTE: Under average conditions the main rotor disc is always horizontal to the general horizon, regardless of the attitude of the aircraft on the ground.

b. Tail Rotor. The tail rotor is about 6 feet in diameter and has a very high speed of rotation (2,000 rpm). The pilot may not see persons or animals approaching the tail rotor since, for him, it is in a blind spot. The rotor tip is close enough to the ground to be a danger even for small dogs and, for this reason, animals must be kept clear of LZs or be properly controlled. The aircraft must always be approached from a frontal direction.

c. Cabin Area (Figure 4)

(1) Pilot and Controls. Nothing must fall on or strike the aircraft's controls or restrict the pilot's control movements. The pilot must not be used as a grab point by persons emplaning or deplaning.

(2) Areas between Pilot's Seat and Centre Seat. The men who occupy the two seats immediately behind the pilot must exercise extreme caution and avoid interfering with the pilot's left arm and the area between the pilot's seat and the reversed centre front seat. The man occupying this reversed centre seat is to avoid dropping any item of equipment in the area between himself and the pilot, and must exercise extreme caution to prevent striking or fouling the pilot with rifle butts.

(3) Windshield. Great care must be exercised by persons who occupy the two front seats as the plexiglass windshield is only 3mm thick and can easily be shattered by a jar from an elbow, rifle, pack or boot.

Emplaning and Deplaning

2. The aircraft will normally land to emplane and deplane personnel. Over long grass, bushes or uneven terrain, however, persons and equipment may have to be dropped from the hover at a height of 4 to 8 feet. In order to prevent the aircraft from rocking too much when passengers deplane from the hover, they must not leap out sideways, but rather drop to the ground from the steps provided.

Signals. Day/Night

It is mandatory that NOBODY approaches or leaves the aircraft until the pilot has given the appropriate signal:

3. The signals to be used by day or night are:

a. Emplaning Signals

Pilot (Thumbs up) - Clear to approach in a stooped attitude and emplane

Stick Commander (Thumbs up) - Clear to take off, the men are strapped in.

Note 1: At night, the "approach to emplane" signal from the pilot will be an intermittent flashing of the green navigational light on the aircraft.

Note 2: To emplane a Stick from a point other than from the normal 2 o'clock position, e.g. when the helicopter is on sloping ground, the pilot will

The Rhodesian SAS Combat Manual

Figure 1

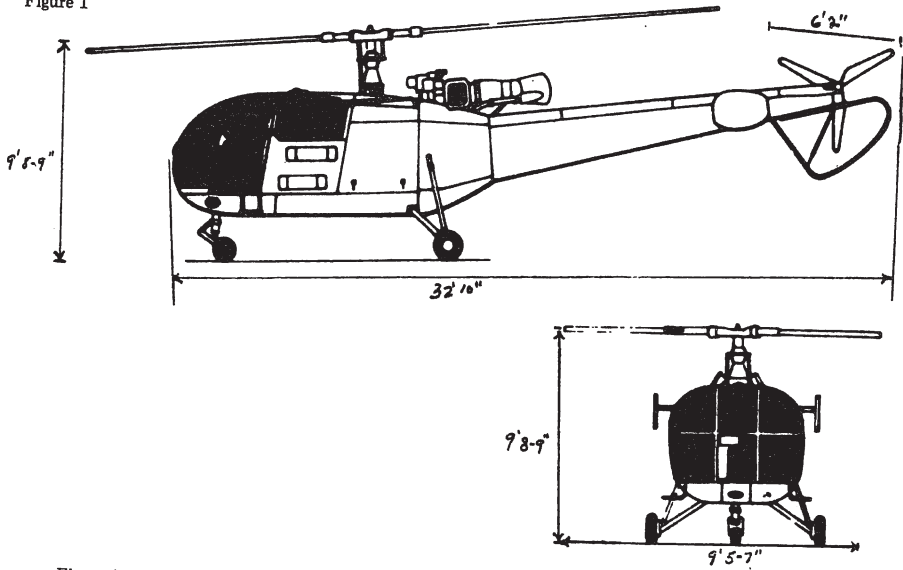


Figure 2

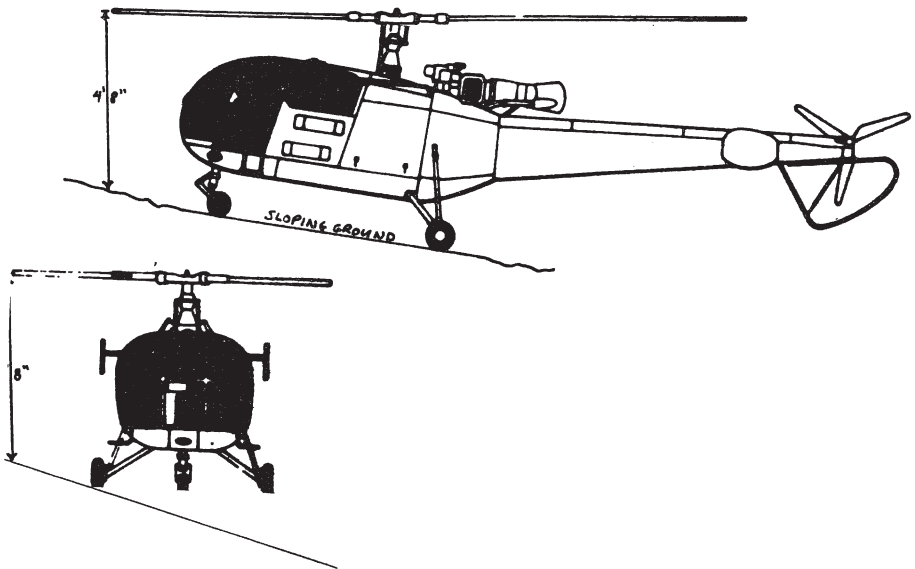


Figure 3

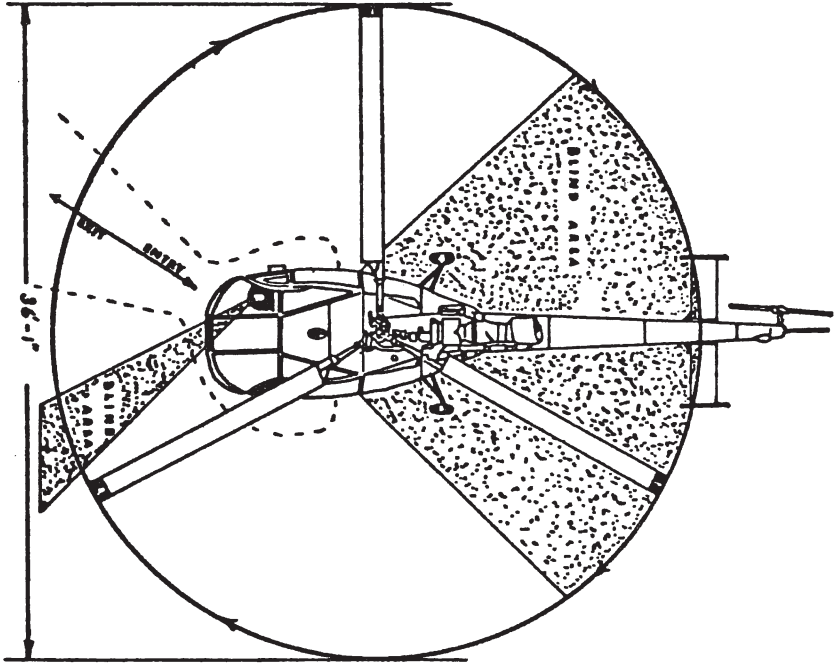
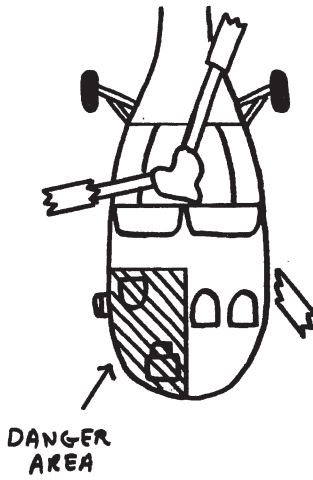


Figure 4



The Rhodesian SAS Combat Manual

first make a "stop" signal. He will then point to the new position from where he wishes the Stick to emplane. The Stick will move to this position and when the pilot is satisfied, he will give the "Thumbs up" emplaning signal.

b. Deplaning Signals.

- (1) Pilot - extends arm and hand...indicates the direction of north.
- (2) Pilot - points...indicates the LZ to the Stick Commander, unless obviously for a different reason.
- (3) Pilot - makes motion with left hand signifying an aircraft landing...means prepare to deplane.
- (4) Stick Commander - raises right arm into the conventional stop sign position and holds it there... confirms - prepared for deplanement.
- (5) Pilot - nods head vigorously...means Stick Commander may order deplanement.
- (6) Stick Commander - drops right arm...means that occupants will deplane as quickly as possible.

c. Other Signals. Subparagraphs a. and b. details standard signals by which all emplaning and deplaning drills are to be done. However, there are two more which must be watched for, especially during troop lifts with large numbers of men. These signals are usually only encountered before emplaning when the pilot of an aircraft calculates that he is able to lift out part of a Stick. These are:

- (1) Pilot - raises open right hand, palm out (i.e. stop sign)...means - hold positions, do not emplane.
- (2) Pilot - various numbers of fingers extended - indicates corresponding number of persons to emplane. The Stick Commander must then arrange the Stick as required. Once the pilot sees that this has been done, standard signals for emplaning follow.

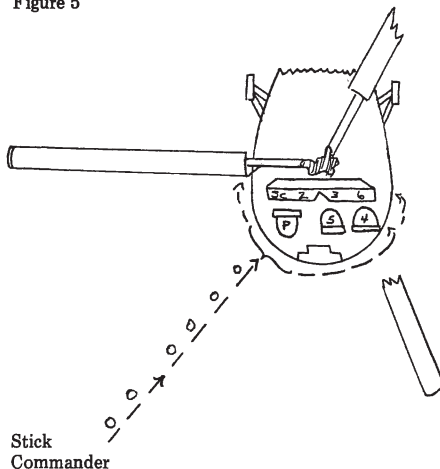
Straps and Security Bars

4. Lap straps or securing bars are only provided for personnel occupying the two outside rear seats.

Stick Numbering and Positions

5. Figure 5 illustrates where the Stick should line up in relation to the aircraft, how the Stick is numbered and the positions to be taken up in the aircraft by a Stick of six personnel. With Sticks of less than six men the seating position is the same, i.e. Nos. 5 to 2 will always occupy the position as indicated by the illustration. The Stick Commander is always immediately behind the pilot.

Figure 5



Stick
Commander

Notes

1. In operations, the position of No. 6 will normally be occupied by an air gunner. A Stick of 5 men will therefore be regarded as normal for operational areas.
2. Stick Commanders are requested to place the lightest men in the No. 5 and No. 4 positions. This assists pilot handling by limiting the forward centre of gravity movement.

Emplaning

6. a. Stick Commander, No. 2 and No. 3 carry rifles reversed in left hands and packs in right hands. No. 4, 5 and 6 carry rifles in right hands and packs in left hands. All personnel to ensure caps or hats secured under belts or shirts.
- b. Nos. 6, 5 and 4 always enter the aircraft on the PORT side. Nos. 3, 2 and Stick Commander enter the STARBOARD side.
- c. No. 6 enters the PORT door with his rifle and pack, lifts the securing bar off his seat and sits down with the rifle under his pack. Rifle points outwards and is laid across the lap.
- d. No. 5 drops his pack next to the PORT front door, hands his rifle back to No. 4 and occupies the centre front rearward facing seat via the PORT front doorway.
- e. No. 4 passes to No. 5 two rifles followed by one pack. The rifles are passed butts first and placed against No. 5's groin. No. 4 occupies the front

The Rhodesian SAS Combat Manual

outside rearward facing seat with his own pack in his hand. Rifles are placed across laps with packs on top of rifles.

f. No. 3 drops his pack next to the rear STARBOARD door as does No. 2. No. 3 passes his rifle back to No. 2 and occupies the seat next to No. 6 via the STARBOARD rear door.

g. No. 2 passes two rifles, butts first, to No. 3. The rifle butts are placed in No. 3's groin with muzzles raised and held to permit No. 2 to enter the STARBOARD rear door and sit next to No. 3.

h. The Stick Commander passes his rifle butt first to No. 2. He then passes two packs to No. 3 and No. 2 and enters the STARBOARD rear door with his own pack. The Stick Commander lifts his securing bar off the seat and sits down. Rifles are placed across laps with packs on top of rifles.

j. The Stick Commander taps the pilot's left shoulder and gives the thumbs up sign for take off next to the pilot's left eye.

k. In flight, the Stick Commander takes the radio headset from the rear bulkhead and places it on his head. An incorporated On-Off switch permits two way communication with the pilot via a boom mounted microphone and earphones.

Deplaning

7.a. Normal.

(1) During an approach to landing, the pilot will instruct the Stick Commander to remove his headset and prepare for landing. The Stick Commander is to replace the headset on the rear bulkhead hook. The Stick Leader then raises his left hand as a "Prepare to deplane" signal to his Stick.

(2) When the pilot gives the Deplane signal by nodding the head, the Stick Commander drops his left hand and each man leaves the aircraft via the same doorway that he entered.

(3) Each man throws his own pack out of the aircraft and departs with his personal weapon.

(4) Stick Commanders account for their Stick and give the pilot thumbs up to clear the area.

(5) Pack are retrieved after the aircraft departs.

b. Rope Descent.

(1) The rope descent is made through the starboard rear doorway. The Stick Commander is, therefore, first out followed by No. 2, 3 and 4 in that order. The Stick size will normally be 4 men.

(2) Because it is necessary to return the rope into the helicopter after a rope deployment, the helicopter technician will be present for all rope descents. The need to deploy by a rope descent will necessitate hovering at such a height that pay

load will be reduced because of the higher power demand.

(3) With assistance, the Stick Commander pulls out the rope (contained in a bag) from under the rear seat. The bag is then filled with all the rifles from the Stick. Rifle magazines are to be removed and placed in pockets.

(4) The Stick Commander, when given clearance to deplane, lowers the bag to the ground and then deplanes in the following manner:

(a) With left hand, grip lower section of the pilot's seat.

(b) Place right leg on step and right hand grips the rope between the floor and the step.

(c) Rising gently down over the step moving left hand to rope below step level.

(d) Continue hand over hand to ground level. DO NOT HURRY.

(5) The remainder of the Stick follow by the same method, ensuring that only one man is on the rope at one time.

(6) Radios, map boards, etc. are lowered by the technician after the Stick is on the ground.

Police Handler and Dog Drills

8. A maximum of three handlers and three dogs can be carried in the Alouette III. This number of men and dogs is determined by space available. The Stick concept is retained with the Stick Commander to the rear. All drills, including hand signals, are standard. On emplaning, the handler is to attempt to keep his dog outside the aircraft while he gets into the seat. It is extremely important for the Stick Commander to prevent his dog reversing between the pilot and front centre seat where the collective pitch level is situated. NOTE: Dogs are to be held on a short lead while emplaning and deplaning because they have a tendency to be attracted to the main and tail rotors.

Stick Commander's Responsibilities

9. The Stick Commander's responsibilities are as follows:

a. Before Flight.

(1) Brief his Stick as to what signals will be used during emplaning, in flight and deplaning.

(2) Ensure that all caps or jungle hats are secure or removed.

(3) Ensure that all items of equipment, i.e. water bottles, machetes, ammunition pouches, etc. are secure on the person.

(4) Ensure that all loose straps on packs and equipment are tucked away.

The Rhodesian SAS Combat Manual

- (5) Check that antennae on radios are removed and stored.
- (6) Ensure that weapon slings are tight and carrying handles folded down.
- (7) Ensure that normal weapons safety precautions have been adopted, i.e. no round in the breech and safety catch applied.
- (8) Ensure that weapons and equipment are carried in the appropriate hand and in the correct manner.. (see Paras. 7 and 8)
- (9) Check that the Stick is ready for emplaning before the aircraft arrives, if possible.
- (10) Ensure that the lightest man in the Stick (excluding himself) are numbers 4 and 5.

b. During Flight.

- (1) Watch the pilot for any signals. Most instructions will be made verbally via the helicopter radio headset.
- (2) Keep a lookout for watering points which may be of use to his Stick.
- (4) Keep a lookout for possible LZ and DZ sites that may be of use in the future.
- (5) Refer to the sun/moon, aircraft compass, etc., to try and retain a sense of direction.
- (6) Give the correct signals to his Stick at the appropriate times.

c. After Flight.

- (1) Ensure that all his men have cleared the aircraft before giving the "thumbs up" for the aircraft to clear.
- (2) If the LZ is not secure, post his men in positions to cover the aircraft from possible enemy action.

Note 1. Remember the old proverb, "more haste, less speed", as this may affect the success or failure of any exercise or operation.

Note 2. The five golden rules of helicopter operations are as follows:

- a. WAIT for signal before emplaning.
- b. GIVE pilot signal for take-off.
- c. WAIT for signal before deplaning.
- d. GIVE pilot signal to fly away.
- e. AVOID tail rotor at all times.

Appendix 2 to Annex "D"

Helicopter Casualty Evacuation (Casevac)

1. The Alouette III may carry six sitting patients or, alternatively, two stretcher patients in the rear of the cabin plus two sitting patients or medical

attendants in the front seats. (Some Alouettes have the capability of hoisting a casualty up into the aircraft while at the hover.)

Signals

2. Standard day/night signals are observed when using the helicopter in the CASEVAC role. Remember that nobody is to approach or leave the aircraft until signalled by the pilot to do so.

Stretcher Cases

3. The helicopter is equipped with its own stretchers. They are of aluminum and canvas construction with push-in type handles at each end. To withdraw these handles, pull on the loops provided. The stretchers are hinged in the middle and are folded into a compact unit for storage.

Drill for CASEVAC

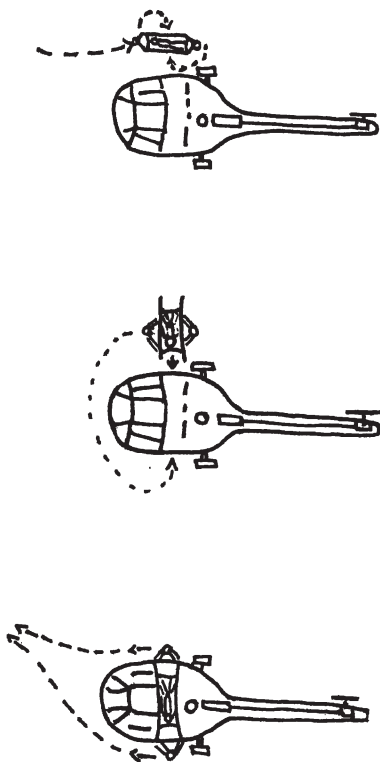
4. Emplaning. On the "thumbs up" signal from the pilot, the patient is brought on the stretcher - feet first. From the 2 o'clock position, the stretcher is placed on the starboard (right) side of the aircraft. The person who was at his head goes to the left side of the stretcher and the one at his feet goes to the right side. The stretcher is lifted so that the patient's head enters the cabin area first and the stretcher is pushed in across the cabin floor. The orderly who was on the patient's left goes around the front of the aircraft to the other side and assists in loading the stretcher. Should there be two stretcher cases to uplift, the first stretcher is then lifted from the floor about 2 feet and placed on the stretcher front support bracket and then lowered onto the two rear support brackets on the rear bulkhead. The pilot usually assists in loading the stretcher on the support brackets. Once this has been done, the handles must be stowed and the chest and foot safety straps locked and tightened. The second stretcher case is brought in and locked and tightened and the sliding doors closed. Seated patients would then emplane in the normal manner.

5. Deplaning. To unload the casualties, the reverse procedure is used, i.e. the bottom stretcher is removed from the aircraft and, on clearance from the pilot, is carried from the aircraft out via the 2 o'clock position clear of the LZ. The stretcher bearers then return to the aircraft observing the normal signals. The second stretcher is lifted off the upper supports, lowered to the floor and

The Rhodesian SAS Combat Manual

removed from the aircraft. The rear cabin doors of the aircraft must be closed before the second stretcher is carried clear of the LZ. See Figure 6.

Figure 6



Appendix 3 to Annex "D"

Landing Zone Requirements

Landing Zones

1. General. Contrary to popular conception, the helicopter cannot rise or descend vertically except when very lightly loaded. When a wind is blowing it is necessary for the aircraft to assume an angled approach and take off into the wind as would a conventional aircraft. Since the wind may blow from any quarter, a permanent LZ must be circular. In Rhodesia, numerous landing zones can be found. Fifteen to twenty minutes spent on a recon of the local area may save hours of hard work cutting an LZ. Remember that the area must be as level as possible, but small undulations and a slope of not greater than 10 degrees can be tolerated. When the helicopter is fully loaded, the underside of the aircraft comes to within 6 to 9 inches of the ground, hence the requirement for the inner circle to be carefully cleared.

Permanent LZ Day Use Only

2. By day, the minimum landing zone requirements are shown in Figures 7 and 8. Details are as follows:

- A circle of 15 yards diameter cleared to ground level. Short grass should be left in an effort to reduce the dust which can be a hazard to the pilot. Do not burn the area. Leave no rocks, stumps or long grass within this circle.
- Outside of the above landing area, an outer clearing giving an overall cleared area of 50 yards diameter, which must be clear of obstructions in excess of 4 feet above ground level.
- An approach and take-off path into wind of 50 yards width must be provided. The angle must not be greater than 30 degrees in elevation. This angle is measured from the edge of the inner circle and taken from the eye level of the average person.

Permanent LZ Day and Night Use

3. By night, the requirements are the same as in Paragraph 2, but the dimensions are greater:

- The inner circle is increased to 30 yards.
- The outer circle is increased to 100 yards.
- The approach and take-off path angle is reduced to 10 degrees.

The Rhodesian SAS Combat Manual

Figure 7

Plan View

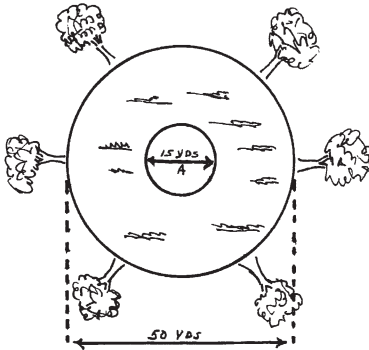
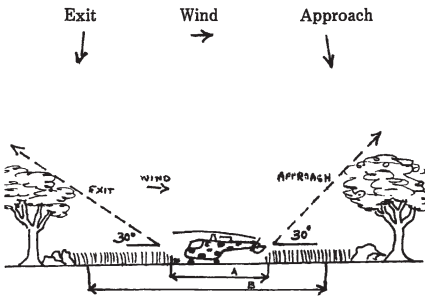


Figure 8

Side Elevation



Landing Zones (for one time operation only)

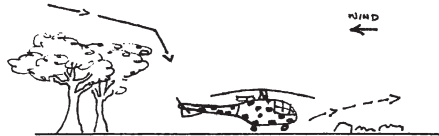
4. It may not always be possible to cut LZs to the correct dimensions before aircraft arrive to uplift or drop troops. Thus it is important that troops on the ground and in the air keep a good lookout for possible sites.

5. Remember that if an aircraft is arriving to uplift troops, it will be light and thus can make a vertical descent. However, with troops on board the aircraft will require a long shallow exit path. The reverse is the case for dropping troops (see Fig. 9).

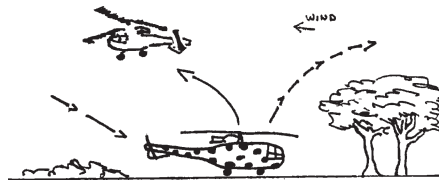
6. Remember also that it is not always necessary to have the approach and take off paths directly into the wind, e.g. if the wind is light and the nature of the terrain dictates a better approach and takeoff path. Use your common sense in the selection of these paths. Do not make a half-hearted attempt and leave it to the pilot to sort out - it wastes time.

Figure 9

Uplifting Sections/Casevac



Dropping Sections/Casevac



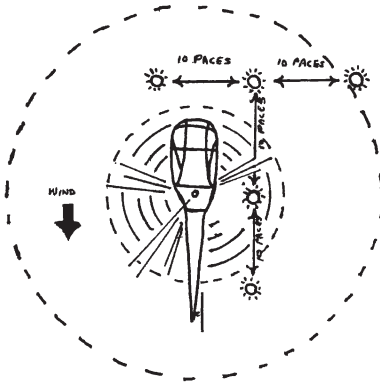
The Rhodesian SAS Combat Manual

Flare Path Requirements

7. General. A helicopter flarepath comprises five lights arranged in the form of a "T". The "T" should be laid into the wind if the wind is strong. If the wind is light, the "T" should be aligned with the best approach and take-off path, i.e. the shallowest angle available.

8. Laying the "T". The lights, usually torches, should be placed on the ground with a 10 yard interval between them. Since the correct procedure is for the aircraft to land slightly to the left of the three lights forming the vertical line of the "T", the "T" should be offset slightly to the right of the central point of the LZ. See Fig. 10.

Figure 10



9. The torches should be laid so that the beam of light is shining up the approach path at an angle of 30 to 40 degrees. If more than five torches are available, do not increase the size of the "T" but double up, i.e. place two torches in each position - one shining up the approach and one shining vertically (See Figure 11.).

10. If no torches are available, then improvise and use 5 of the following:

- a. Hurricane lamps.
- b. Pressure lamps.
- c. One gallon tin filled with petrol soaked sand.

NOTE: Remember to bury the bases of the lamps or they will be blown over when the aircraft lands. (See Figure 12).

Figure 11

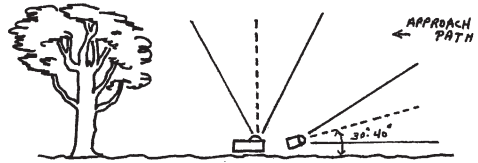
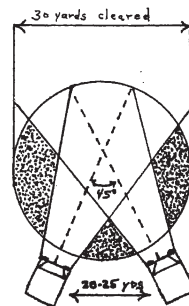


Figure 12



11. In an emergency when no torches, lamps or any other suitable lights are available but two vehicles are on hand, then they can be used in the following manner. The two vehicles should be parked on the edge of the cleared area, 15-20 yards apart and angled at 45 degrees to one another. The lights of the vehicles should intersect at the centre of the cleared area, thus illuminating the LZ. The aircraft will approach from behind and between the vehicles, so make sure that the vehicles do not have antennae protruding upwards. See Figure 13.

Figure 13



Aircraft Approach Path

The Rhodesian SAS Combat Manual

Appendix 4 to Annex "D"

Tactical Deployment of 81mm Mortars by Helicopter

Introduction

1. It is possible, to a limited degree, to deploy 81mm mortars by helicopter to, from or within a combat zone.
2. This deployment can consist of either a detachment of one mortar or a section of two mortars and may be used in either mobile defence or COIN.
3. The drills detailed in the following paragraphs have been finalised after extensive trials with mortars and helicopters. However, it is stressed that each situation must be assessed on current information and commanders must consider all the advantages and disadvantages before using helicopter mortars.

Deployment

4. A detachment is deployed in one helicopter and a section in two helicopters. To enable the mortar crew to function effectively in either the direct or indirect fire role, it is necessary to replace the No. 3 mortarman with an NCO capable of carrying out fire control or computing fire orders on the mortar line.
 5. When a detachment is deployed, the No. 3 mortarman is replaced by either the section 2IC or section corporal. The crew now consists of: Section Commander, section 2IC (as No. 3), Nos. 1 and 2 mortarman. This composition of a detachment is flexible and may be adjusted as necessary.
 6. When a mortar section is deployed, the second helicopter will have a similar mortar crew except that the section corporal becomes detachment commander and the No. 3 resumes his original post. An example of a typical deployment of a mortar section is as shown:
- | No. 1 Helicopter | No. 2 Helicopter |
|-------------------|------------------|
| Section Commander | Section corporal |
| No. 1 | No. 1 |
| No. 2 | No. 2 |
| Section 2IC | No. 3 |
7. Prior to take-off, it is the responsibility of the section/detachment commander to ascertain the following details from the infantry commander:
 - a. Grid reference of target and description.
 - b. Exact position of our own troops.
 - c. Suitable baseplate position, if possible.
 - d. Distance from present position to target area, to enable him to work out the flying time if an airborne observation post is necessary.
 8. If it is not possible to obtain the above details from the infantry commander, every endeavour should be made to obtain the details from the infantry commander in the target area during flight.
 9. Both the pilot and the mortar commander must positively identify the target and the position of own troops on the ground, while in flight. Having done this, they can then select a suitable baseplate position, preferably to a flank or to the rear of our own troops. The ground force commander is then notified of the baseplate position.
 10. The helicopter(s) then land at the chosen baseplate position and all equipment is off-loaded. The pilot may then either return for more ammunition or become an airborne observation post.
 11. Although the mortars will take manpack equipment with them, it must be borne in mind that if the mortars must carry out a long foot march after an airborne deployment, they would (due to weight of equipment and ammunition) require infantry assistance.
 12. Deployment of mortars in COIN. A suggested method for the deployment of mortars in COIN is to have the platoon/troop under a central control at a JOC. Detachments or sections can then be allocated to separate tactical headquarters as the situation develops.

Fire Control

13. Methods of fire control which may be used are:
 - a. Air Observation Post. When the mortars have been landed at the baseplate position the helicopter remains behind the mortar line to await the first ranging round. All corrections are given by the pilot. A brief on mortar fire control for use by pilots is shown at paragraph 31. The most probable method of employment of an air observation post is for the helicopters to drop the mortars, then hand over to a light fixed wing aircraft who will then carry out the fire control. The helicopter

The Rhodesian SAS Combat Manual

will then be available to collect more ammunition or carry out other tasks as required within the combat zone.

b. Static Observation Post. For this method, the helicopter lands the section commander in a suitable observation post on the ground and he then carries on with the normal mortar fire control procedure. Caution must be exercised before dropping the section commander off in a forward position.

c. Infantry/Mortar Target Grid Procedure. If, due to difficult terrain, the section commander or the pilot are unable to locate the target, then the infantry commander on the ground must direct the fire using normal target grid procedure.

Communications

14. The SR A60 radio sets are carried by the section commander and the control post operator for communications from the mortar line to the pilot and local infantry.

15. Fire control orders between control post operator and pilot must not be duplicated as this wastes flying time.

16. During flight, the section commander should use the spare head-set available in the helicopter.

Loading

17. The crew will adopt the normal one o'clock position with the section commander carrying the plotting board, the No. 1 the radio and No. 3 the bipod, in addition to their personal weapons.

18. On receiving the thumbs up from the pilot, the crew move forward to the two stores piles. The section commander, No. 1 and 2 to the right hand stores pile and No. 3 to the left hand stores pile.

19. The following action is now carried out:

Left Hand Stores Pile

a. The No. 3 places his rifle and bipod down and takes up 4 panniers of ammunition and places these on the seat next to the pilot.

Right Hand Stores Pile

No. 2 hands his rifle back to the No. 1 picks up the cleaning rod and barrel and places it on the floor in front of the back seat. The No. 2 now gets in and sits next to the technician.

Left Hand Stores Pile

b. The No. 3 places the remaining two panniers of ammunition on the left rear floor

c. The No. 3 places the bipod on top of the accessory bags with the bipod legs facing the door.

d. The No. 3 collects his rifle and gets into the helicopter.

e.

Right Hand Stores Pile

The No. 1 hands the radio to the section commander, places both his and the No. 2's rifle on the ground and then hands the baseplate to the No. 2 who places it down in front of the middle seat.

The No. 1 then hands the accessory bags and aiming post to No. 2 who places them on top of the baseplate.

The No. 1 collects the rifles of the section commander, No. 2 and his own, hands them to the No. 2 and gets in.

The section commander hands the radio to the No. 1 and gets in, placing the plotting board between his knees and the pilot's seat. He then straps in, checks his crew, puts on the aircraft headset and gives the thumbs up signal to the pilot.

NOTES:

1. The No. 3 does not strap in.
2. The No. 1 wears the sight unit and case on his belt.
3. The bipod, plotting board and radio should be covered in a plastic bag for dust protection.
4. The barrel and bipod carrying straps are tied round the No. 2 and 3 respectively.

Unloading

20. This is carried out in the reverse order.

The Rhodesian SAS Combat Manual

21. The equipment is unloaded directly onto the ground next to the helicopter. The section/detachment commander is personally responsible for checking that all items have been off loaded.

22. The crew then move to their defensive positions and give thumbs up to the pilot.

23. A diagram of the equipment prior to and after loading is shown in Appendix 4A.

Load Capabilities

24. The following tables indicate the permutations of equipment and personnel which can be carried in the Alouette III helicopter:

a. Equipment	Weight
Barrel long	35 lbs
Barrel short	30 lbs
Bipod	27 lbs
Baseplates	32 lbs
Aiming post and bag	13 lbs
Cleaning rod	4 lbs
Baseplate Harness	6 lbs
Six empty panniers	18 lbs
36 rounds (7 lbs each)	252 lbs

Total weight	387 lbs long barrel
Of stores	383 lbs short barrel

b. Personnel	Weight
Section commander with rifle, ammunition, plotting board and radio.	200 lbs
No. 1 control post operator with rifle and radio	218 lbs
No. 2 plus rifle	200 lbs
No. 3 plus rifle	200 lbs
Weight	815 lbs

c. Approximate gross weight is 1205 lbs.

Radius and Action of Helicopter

25. A helicopter carrying 1205 lbs plus helicopter crew and max fuel will be able to fly for 44 minutes, but larger than normal LZs will be required for take-off and landing.

26. As an example, a helicopter fully loaded as above, flying to a target 20 miles away, will take approximately 15 minutes each way, allowing 14

minutes for airborne fire control duties.

Re-supply

27. In the event of a Trojan or similar aircraft being available as an airborne observation post, the helicopter may, if possible, return to collect extra ammunition from the base. In this case the drivers, plus any other available personnel, must have the ammunition waiting at the helicopter pad and assist in the loading when the helicopter returns.

Training

28. The drills for mortars deployed by helicopters require a high standard of training and commanders are to ensure that mortar platoons/troops get every possible opportunity to practise on both live and dry firing exercises.

29. This applies equally to helicopter and Trojan pilots and every endeavour should be made to practise pilots in fire control.

30. Whenever such shoots are carried out, units should ensure that observers of the company commander/platoon commander/platoon sergeant level attend.

Mortar Fire Control: Brief for Pilots

31. Initial Action

a. After the mortars have been dropped off by the helicopters and communications have been established, you then pass the following information to the mortars:

- (1) Range from mortars to target. Estimated only, and given in yards, e.g. range 3000 yards.
- (2) Magnetic bearing from mortars to target. To give this bearing, you must position the aircraft/helicopter directly on the mortar/target line.

b. Having passed this information, there will be a slight delay while the mortars set their sights and work out ranges, etc.

c. The next communication you will receive from the mortars will be to the effect that bedding-in is complete and they are ready to commence ranging.

32. Ranging

a. The mortars will fire one round of smoke on the range and line given by you. The voice procedure

The Rhodesian SAS Combat Manual

used in this instance is, "Shot. Time of flight is 21 seconds".

b. The pilot must ensure that he is on the zero line (i.e., mortar-target line) close to the expiry of the 21 second time of flight limit.

c. Corrections of the fall of shot onto the target are passed as follows:

(1) All corrections are given in yards in multiples of 25, e.g. left 25 add 50 or left 50 add 100, etc.

(2) First correct for line, i.e. move the fall of shot onto the mortar target line by left or right correction.

(3) Then correct for range, by either sending add or drop corrections.

(4) If the shot is close to the target, correct for range and line at the same time, e.g. right 50 drop 100.

(5) If a round is correct for line and you wish to correct for range, adopt the bracketing method, i.e. shot is approximately 200 yards plus of target, give a correction of drop 200 yards. Shot is now 100 yards plus of target, cut original correction in half and give drop 100 yards. If shot falls short of target, half your correction again and give a correction of add 50 yards. This method may also be used for line corrections. An example of the bracketing method is shown in appendix 4B.

(6) If a round lands and does not explode, ask for a repeat of shot.

(7) If the round is on target, order "on target, fire for effect".

33. Last Bomb

a. The last bomb of each action will be smoke. This will indicate to the pilot that there are no more bombs in the air and it is safe to overfly the target area.

The Rhodesian SAS Combat Manual

Appendix 4A to Annex "D"

Seating of Personnel and Equipment

Layout of Equipment on LZ

X Det Comd (plotting board)

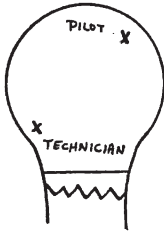
X No. 1 (Radio)

X No. 2

X No. 3 (Bipod)

Wind

B

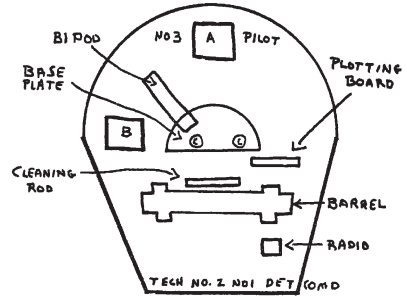


A

Stores Pile

A Barrel, cleaning rod, baseplate with harness, accessory bags

B Six panniers of ammunition laid out in one pile of two and one pile of four



A. 4 panniers ammo

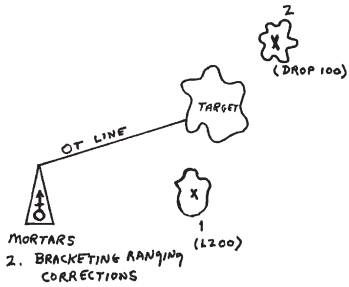
B. 2 panniers ammo

C. Accessories bags

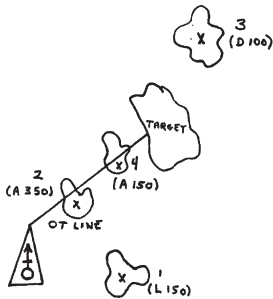
The Rhodesian SAS Combat Manual

Appendix 4B to Annex "D"

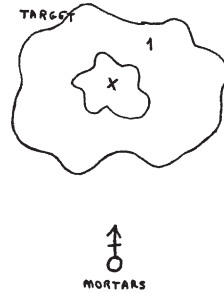
1. Normal Ranging Corrections (not to scale)



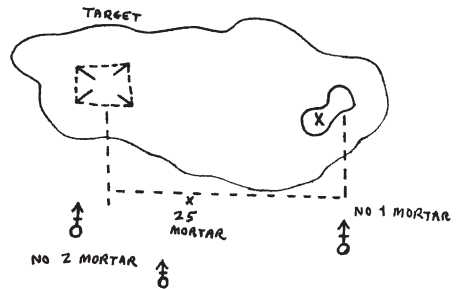
2. Bracketing Ranging Corrections



3. Example of correct fall of shot on target with one mortar.



4. Example of correct fall of shot on target with two mortars.



The Rhodesian SAS Combat Manual

Annex "E"

Close Air Support (COIN Operations)

1. There is a need for a simple procedure for offensive close air support. This procedure should be practicable at section or half troop level and should cater for two situations. These are:

- a. When the troops on the ground have no intimate air support and aircraft will have to be requested by the ground forces.
- b. When the ground forces are known to be in close proximity to the enemy (e.g. a deliberate follow-up) and an aircraft has been tasked in support, is airborne and is in radio contact with the ground forces.

Aim

2. The aim of this section is to describe a system of close air support procedures that will cater for the two situations mentioned above.

Background

3. The system is designed primarily for Trojan aircraft but could also be used with other aircraft.

4. The procedures for requesting air support as laid down in AP 5011 and MCP are applicable to the proposed system and have not been changed. These procedures commence from the time radio contact between the aircraft and the ground forces has been established.

5. Simplicity is the key note of the system. Elaborate equipment and complicated ground/air procedures have been rejected. However, any commander of a patrol who has additional equipment and facilities to assist the indication and target is at liberty to use them in conjunction with the following techniques which are given to ensure at least one standardised method.

6. The terminology adopted and used throughout this paper is as follows:

a. Close Air Support (COIN Ops). Instances where an RAF Trojan aircraft is required to strike or indicate a target in support of ground forces and is directed onto the target by a member of the ground forces.

b. Ground Air Controller (GAC). The title conferred on the ground forces commander who is responsible for indicating to the pilot the Forward Line of Own Troops (FLOT) and the target.

7. The term GAC has been adopted in lieu of FAC as the latter is liable to give an erroneous impression in COIN operations.

Procedures for Close Air Support (COIN Ops)

Homing of Aircraft

8. Once communications have been established, the aircraft will be brought overhead the contact area by using the BEKKER homing device or by verbal instructions.

9. When the GAC can see the aircraft he is to call "visual" and direct the aircraft to a position directly overhead the contact area. When this has been effected, the GAC will inform the pilot that he is overhead. The pilot will then orbit the area.

10. During the approach of the aircraft, circumstances permitting, the GAC should give the pilot a brief "oral picture" of the situation, i.e. which direction he is facing, how far the enemy are from his FLOT and a brief description of the target area. At this time the pilot is to advise the GAC of the weapon to be used and the danger area. This will enable the ground forces to adjust the FLOT if they are within the danger area.

FLOT Indication

11. Once the aircraft starts to orbit, the GAC should tell the pilot what method he will use to indicate his FLOT and ask for clearance to do so. Having received clearance from the pilot, he will then indicate his FLOT by using one of the following methods in this order of priority:

a. The GAC will detail the two extreme flank men to throw one smoke grenade each, in the most suitable direction from their position. If this is not practical, he should select two men closest to the enemy position to throw the grenades. (The most satisfactory grenade colours are orange, white, phosphorous, yellow and then red).

b. The GAC can give the pilot a verbal description of the FLOT at any time during the procedure if prominent landmarks are available.

c. If available, ground/air panels may be used in conjunction with the methods outlined in sub paragraphs a. and b. above, not only to indicate a FLOT, but also to establish a TANGO in rear to indicate the direction of the enemy target forward of the FLOT.

12. During the FLOT indication procedure the

The Rhodesian SAS Combat Manual

GAC will help the pilot if he tells him where the aircraft is in relation to the FLOT, e.g. "You are now behind me" or "you are now in front of me and are above the target area".

13. The pilot must acknowledge that he has identified the FLOT by calling "Contact FLOT". If he cannot identify it he will call "Negative FLOT" and will ask for a repeat indication.

14. In all cases of FLOT indication, the GAC should inform the pilot of the method to be used and must wait for the pilot to give him the order to indicate or the pilot may be unsighted at the crucial moment.

15. If the GAC can see the aircraft when it is some distance away from his position, it will be preferable to indicate his FLOT, using the same procedure as given above, during the approach of the aircraft and before the aircraft starts to orbit. This will save time and will immediately indicate to the pilot where the ground forces are situated.

16. Once the FLOT has been established/identified, no pronounced movement other than to the rear is to be taken. If it should become necessary to move forward of the FLOT, the air strike is to be called off by the call STOP! STOP! STOP! and the new FLOT be indicated before the resumption of the air strike.

Target Indication

17. Immediately after the pilot has confirmed that he has identified the FLOT, the GAC should ask for clearance to indicate the target. Having received this clearance from the pilot he will indicate the target by using one, or a combination of the following methods, in this order of priority:

- a. He will fire a RED flare in the direction of the target. If possible, he should attempt to place the "fireball" in the target area. Using this fireball as a reference point he can then give the necessary corrections, by "Clock Ray" method, to the target.
- b. He will throw one smoke grenade towards the target area. He will then give corrections from the burst as in 17a above.
- c. He can use the "Clock Ray" method of indication and give a verbal description of the target. The FLOT or any other identified prominent feature can be used as the centre of the clock.

18. When the pilot is positive that he has identified the target he will call "Contact Target" and

will advise the GAC of the direction of his attack, i.e. Left or Right.

19. He may ask for a repeat indication at any stage in order to confirm the position of a target.

20. Thereafter, radio transmissions should be kept to a minimum.

Aircraft Attack

21. Having informed the GAC of the direction of the attack, the pilot is to move to the relevant flank and turn in for his attack.

22. Whenever possible, when the aircraft turns in for the attack the GAC should fire one or more flares towards the target. This will facilitate easy identification of the target by the pilot, who will now be looking at it from a different direction.

23. When the aircraft turns in for the attack, maximum covering fire should be directed at the target to safeguard the aircraft. Covering fire is to be laid on the target throughout the strike to include the pull away from the target and until the aircraft is out of small arms range of the enemy. This should be automatic and should not have to be requested by the pilot. The fire should only be stopped if there is a likelihood of endangering the aircraft while it is overhead the target.

24. If the aircraft is attacking the wrong target or is likely to endanger own troops, the GAC should call "STOP, STOP, STOP" and the attack will be abandoned.

25. If at any stage, radio communications are lost the air strike is to be broken off automatically.

26. After each strike the GAC should give corrections to the pilot relative to his last strike, e.g. "You were 50 yards too short" or "you were too far left by 25 yards". These corrections are to be assessed in relation to the aircraft line of attack and not as seen from the position of the GAC. He should, if possible, inform the pilot of the success of each strike. The pilot is to advise the GAC on completion of the last live attack and should then follow up with a dummy attack which will cover the move forward of the ground force.

Strike Assessment

27. On completion of the attack, the pilot is to

The Rhodesian SAS Combat Manual

give a brief "in flight" report. If in the opinion of the pilot and GAC further air effort or heavier air strike is required, the pilot is to originate the air request. Endurance permitting, the pilot is then to act as an airborne FAC for the direction of the extra effort. If endurance does not permit, then the procedure for establishment of FLOT and identification of target is to be repeated by the GAC for the new aircraft.

General Notes

28. The GAC should try to indicate the target

while the FLOT is still identifiable to the pilot, e.g. while the smoke grenades are still burning.

29. If necessary, the pilot should ask for a repeat indication of the FLOT or the target if he is unsure of these positions and wishes to confirm them. The GAC should anticipate this happening and should prepare his patrol to "feed" the smoke indication.

30. Safety distances for various air weapons may be found in an annex to this chapter.

The Rhodesian SAS Combat Manual

Appendix 1 to Annex "E"

Safety Distances for Helicopter MAG Support

Introduction

1. The 7.62mm MAG fitted to the helicopter is intended primarily as a defensive weapon, but it can be used in an offensive (close support) role.

2. The weapon can be fired from the hover at 50 feet above ground level (AGL), from a straight pass to the side of a target at 500 feet AGL and from an overhead orbit at 800 feet AGL. In all cases, the range at which a target will be engaged is approximately 400 yards and the cone of fire is concentrated within 20 yards.

Safety Distances

3. Hover Attack Pattern (HAP). As the helicopter is immediately above the troops on the ground in the HAP, there is no requirement for safety distances.

4. Overhead Attack Pattern (OAP).

a. For training and exercises the safety distance is 200 yards from the target.

b. On operations, the safety distance is 150 yards from the target.

5. Passing Attack Pattern (PAP). The safety distance for a PAP is 200 yards from the target.

Safety Distances for Various Aerial Weapons

1. The following are approximate safety distances at which troops may be positioned away from aircraft attacks on ground targets. These distances are based on the assumption that the aircraft attack from the direction of the troops towards the enemy:

7.62mm and .303 in	100 yards
20mm and 30mm cannon	150 yards
37mm Rocket (unboosted)	100 yards
37mm Rocket (boosted)	150 yards
68mm Rocket	150 yards
60 lb Rocket	300 yards
18 lb Rocket	250 yards
20 lb Frag Bomb Mk1	300 yards
12 lb Frag Bomb Mk2	400 yards
250 lb GP Bomb	500 yards
500 lb GP Bomb	1000 yards
1000 lb GP Bomb	2000 yards
400 kg GP Bomb	2000 yards
16-20 gallon Frantan	100 yards
50 gallon Frantan	150 yards
Free Fall Flechette	100 yards
1000 lb "Golf" Bomb	2000 yards
"Mini Golf" Bomb	200 yards

Note: Distances shown refer to exposed troops.

2. A great deal depends on what type of ground these weapons are fired - fragmentation will naturally occur more readily on hard or open ground.

The Rhodesian SAS Combat Manual

Appendix 2 to Annex "E"

Procedure for Airborne Forward Air Controller (AFAC) Directed Attacks

1. The following procedures are to be adopted by the AFAC pilot after he has positively identified both the target and Forward Line Own Troops (FLOT) in accordance with the Standard Close Air Support Procedures. Having assessed the situation, the AFAC pilot will decide either to deal with the target himself and/or call for heavier Air Support. The request for strike aircraft will be passed through normal VHF/HF SSB Channels.

2. As each contact is likely to be different, it is not possible to lay down a hard and fast procedure for AFAC. However, there are certain basic requirements which are to be considered essential and mandatory for any AFAC directed strike.

Sequence of Events

3. The following sequence of events is tabulated to illustrate a typical AFAC directed strike. All mandatory requirements are in capital letters.

a. Trojan on follow-up establishes FLOT and TARGET and gives support with 37mm RP. The enemy are giving strong opposition and have dug in. Trojan pilot calls for heavier air support through FASOC/JOC on VHF/HF SSB giving the following details:

- (1) SITREP (Brief details of CONTACT).
- (2) POSITION (GRID Ref at CONTACT AREA).
- (3) SUGGESTED AIR EFFORT (TWO PROVS OR VAMPS - FRANTAN).
- (4) REPORTING POINT (Prominent feature within VHF range of AFAC).

b. When the FASOC/JOC are in receipt of the strike aircraft's TOT, this will be passed to the AFAC who will prepare his brief and await the arrival of the strike aircraft at the reporting point (RP).

c. When the strike aircraft arrives at the RP, two way communication will be established and the following details must be given:

- (1) WEAPONS LOAD (2x2 eggs plus 20mm).

- (2) LOITER TIME (20 minutes in the area).

d. Dependent on distance/flight time from RP to target area, the following information will be given by the AFAC to the strike aircraft, while orbiting at height at the RP or while en route to the target.

- (1) DESCRIPTION OF FLOT AND TARGET. Distance and direction of FLOT in relation to

the target is essential.

- (2) TARGET HEIGHT (standard altimeter setting)

- (3) ATTACK DIRECTION (in degrees magnetic).

- (4) METHOD OF MARKING (Smoke or SNEB).

- (5) POSITION OF AFAC (in relation to target).

The AFAC then requests the strike aircraft to call:

- (6) LEAVING RP and

- (7) VISUAL (Strike aircraft have the AFAC in sight).

e. Once visual, the strike aircraft are to position themselves for an attack on the pre-briefed heading and advise the AFAC when he is clear to mark:

- (1) YOU ARE CLEAR TO MARK.

The AFAC will then call his positions in the circuit

- (2) TURNING BASE LEG.

- (3) TURNING IN NOW.

- (4) THE TARGET IS 50 YARDS AT 12 O'CLOCK TO MY SMOKE.

f. Strike aircraft call:

- (1) CONTACT YOUR SMOKE ATTACKING NOW.

g. AFAC observes leaders strikes and redirects.

- (1) LEADERS STRIKE 30 YARDS AT 3 O'CLOCK - "Go left 30 yards No. 2".

Note 1 - No. 2 should space himself in order that he can correct on leader's strike.

Note 2 - If leader overshoots target, AFAC will instruct No. 2 to "Drop" 30 yards. If leader has undershot, No. 2 will be told to "add" 30 yards.

4. The following points will assist in the success of the strike:

a. Strict R/T discipline should be maintained and use of the R/T kept to a minimum.

b. Piston aircraft to keep low and make use of cover following attacks.

c. Jets should arrive at medium level. This will help in locating the AFAC and give a better picture of the target area.

d. The noise of the Trojan will help drown the sound of approaching piston or jet aircraft, helping preserve the element of surprise.

e. All patterns will be left hard unless stated otherwise.

f. AFAC may use the shadow of his aircraft to pinpoint the target. This could also be a useful alternative method for target marking by helicopter.

g. AFAC or the GAC call STOP STOP STOP if aircraft are attacking the wrong target or endangering our own troops.

h. The word "CONTACT" is not to be used in place of "VISUAL" when the strike aircraft has the AFAC in sight.

The Rhodesian SAS Combat Manual

Annex "F"

Standard Operating Procedure For Carrying Out Becker Homings

1. RRAF Freight Dakota, Alouette and light aircraft are fitted with Becker VHF homing equipment which enables the aircraft to home onto any VHF transmitting source. This instruction lays down the R/T procedure to be used by aircraft and ground units when carrying out Becker homings.
2. When the pilot considers that he is in VHF range of the ground station, he will attempt to establish contact with the ground party on the assigned VHF frequency. Contact having been established, the pilot will require a series of transmissions to home to the ground party as follows: "FOOTSLOGGER this is FOXTROT THREE, give me a fifteen second modulated (or unmodulated) transmission, over."
3. When a modulated transmission is requested the ground station should reply:
"FOXTROT THREE this is FOOTSLOGGER, ROGER, one, two, three", etc. for fifteen seconds followed by "FOOTSLOGGER OUT".
4. When an unmodulated transmission is requested the ground station should reply:
"FOXTROT THREE this is FOOTSLOGGER, ROGER" and keep his transmitter button depressed for fifteen seconds of unmodulated transmission and then end the transmission with.....FOOTSLOGGER OUT.
5. The pilot of the aircraft will request transmissions as necessary to enable him to home onto the ground station. The length of these transmissions will not necessarily be of fifteen seconds duration but will be as requested by the pilot. As soon as the ground station hears the aircraft approaching, they should inform the pilot who will then call as follows:
"FOOTSLOGGER this is FOXTROT THREE, give me a continuous unmodulated transmission, OVER".
The ground station would reply:
"FOXTROT THREE this is FOOTSLOGGER, ROGER" and keep his transmitter button depressed until the aircraft passes overhead, when they should say:
"FOXTROT THREE this is FOOTSLOGGER, you are overhead now".

First Aid

First Aid and Preventative Medicine

Section 1 - First Aid

1. It is essential that every man on operations should understand not only the basic methods of first aid to the injured, but also general health - in other words, the principles of preventative medicine. This, in particular, applies to senior and junior leaders who are responsible for the health of their men.

2. Many a soldier has been saved from death or permanent disability because immediate first aid was rendered, and many have died as the result of their comrades lacking the knowledge or the confidence to apply first aid.

3. First Aid. First aid saves lives and stops pain. It is only common sense plus a little specialised knowledge:

- a. A lightly wounded man, if given first aid, can go on fighting. It is therefore essential to act quickly.
- b. A badly wounded man looks pale and sweaty. Be prepared for this. Try to keep him calm.
- c. Don't disturb a wounded man too much unless it is really necessary. He will naturally lie in the safest and most comfortable position.
- d. Look, think and then act. There may be more than one man wounded at once. Treat the most urgent first. Keep under cover. Any fool can be brave and get killed; be brave and don't get killed and save your friends instead. Look, think and then act.

4. Equipment.

- a. Identity discs must be worn and first field dressing carried by every man. The latter is carried in the trouser pocket designed for it.
- b. Each section must carry a "J" Pack.
- c. Extra medical equipment and dressings are carried by the medical orderlies.
- d. Stretchers (local pattern) are available, which consist of canvas only, without poles. The canvas can be carried folded in the pack and poles provided when required by cutting suitable timber on the spot.

5. When a man gets hit beside you:

- a. Calm yourself.
- b. Stop his bleeding.
- c. Keep him warm.
- d. That is all you need to know.

6. Wounds. At the time of injury pain is seldom felt. The sensation is very like a blow received when boxing.

7. When to give a man a drink. Wounded men, with two exceptions, can be given a drink of anything available. A man with abdominal wounds or a man who cannot swallow must not drink. They will die if they do. But you can moisten their lips.

8. To stop bleeding. Bleeding of a slight or severe nature accompanies all wounds. A man can bleed to death very quickly, so act promptly. Bleeding can be stopped by the firm pressure of a dressing accurately applied on or into a wound. The dressing acts as a splint and helps to immobilise the injured part. After the dressing has been applied, do not remove it to see if the bleeding has stopped.

9. Shock. Shock lowers vitality. It kills more men than bullets. It is increased by fear, cold and pain. Restore, by encouragement, the peace of mind of the wounded man. Reassure him by the quiet way you go about giving first aid. All movements of the wounded man must be gentle and reduced to a minimum. Pain is allayed by immobilisation. If pain is severe, morphia should be given. If possible give hot drinks - sweet tea or soup.

10. Abdominal wounds. All cases should be treated as of first urgency. The object is to get the wounded man quickly and comfortably to surgical aid. Don't give this man anything to drink.

11. Chest wounds. The small perforating wound requires little direct attention save the application of a dressing. If the wounded man coughs up blood, explain to him that it must be expected. Reassurance and calmness are essential for his peace of mind. The larger wounds are of the valve type and suck in air; they require immediate first aid. The man finds it difficult to breath. Seal the wounds off with elastoplast or the firm application of a dressing into the wound itself. Bind the

The Rhodesian SAS Combat Manual

dressing firmly to the chest. Transport the patient in the position most comfortable to himself.

12. The jaws and face. The impact of the blow may cause a temporary loss of vision. The first sign is usually a trickle of blood on the face or in the mouth. The patient may faint. A patient with a severe jaw wound should be laid stomach down on the stretcher with his head projecting beyond the canvas and the forehead supported by a bandage sling between the handlebars. This prevents the man swallowing blood and saliva and his tongue falling back. Keep the foot of the stretcher higher than the head to ensure drainage.

13. Broken bones. To allay pain and shock and to prevent the splintered bones damaging blood vessels, nerves and muscles, the bones together with their surrounding tissues and muscles must be immobilised by splinting. Support the broken limb with a well padded splint. Place the limb in its most natural position. Don't let the limb flap around or the sharp ends of the splintered bones will cut the vessels, nerves and muscles to pieces. A broken arm should be bound firmly, but not too tightly, to the chest. After splinting the broken lower limb bind it to the other, foot to foot, knee to knee and thigh to thigh.

14. Injury to spine. In fractures and dislocations, the affected part of the spine should be kept braced well back by ensuring that the stomach and chest are stuck out. The injured man when so braced can be transported either lying on his back or abdomen.

15. Burns.

a. Burns and scalds. If a limb has been hurt, elevate and immobilise it. The exposure method is the best form of treatment in this country. The affected part may be dusted with Penicillin powder. Allay pain if necessary by frequent drinks to which salt has been added.

b. Phosphorous burns. Hold under water, pick out the pieces of phosphorous. Keep the wound wet.

Section 2 - Artificial Respiration, Holger Nielsen's Method

16. For the apparently electrocuted or drowned. In the former case, first free the victim from the current without electrocuting yourself. In the case of the apparently drowned, remove the victim from the water and lay him down with his head lower than his feet.

17. Back Pressure - Arm Lift method of Holger Nielsen (see Annex "A").

a. Begin at once, every second counts.

(1) Lay the casualty face downwards with head turned to one side, arms bent and forehead resting on his hands, so as to keep mouth and nose free from obstruction.

(2) Give one or two firm thumps with the flat of the hand between the shoulders to bring the tongue forward and clear of the throat.

(3) Kneel at his head, placing one knee near the head and the other foot alongside the elbow. The operator's mid-line should be in line with that of the casualty. From time to time this position can be altered by changing the kneeling knee.

(4) Place your hands on his shoulder blades with thumbs touching on the mid-line and fingers towards the casualty's feet, your arms being kept straight and the heels of your hands over the spines of the shoulder blades.

b. Bend forward with arms straight and apply light pressure by the weight of the upper part of your body while steadily counting "One, two and three". Time is 2½ seconds. This forces the air out of the lungs.

c. (1) Release pressure gradually and slide your hands to just above the elbows of the casualty, counting "Four". Time is 1 second.

(2) Draw his arms and shoulders towards you by bending backwards with your arms straight until you feel resistance and tension, without lifting the chest off the ground, counting "Five, six and seven". Time is 2½ seconds. This draws air into the lungs.

d. Lay down his arms and replace your hands on the shoulder blades counting "Eight". Time, 1 second.

e. Repeat the movements with rhythmic rocking at the rate of approximately nine times to the minute, counting as follows: "One, two and three": with hands on shoulder blades, bend forward and apply pressure (2½ seconds). "Four": slide hands to elbows (1 second). "Five, six and seven": bend backwards raising arms and shoulders (2½ seconds). "Eight": lay arms down and place your hands on shoulder blades (1 second).

f. When breathing is reestablished, omit the back pressure and continue the arm raising and lowering alone at the rate of 12 times to the minute, counting as follows: "One, two and three": arms raising (inspiration, 2½ seconds). "Four, five and six": arm lowering (expiration, 2½ seconds).

Section 3 - Artificial Respiration, Mouth to Mouth or Mouth to Nose Method

The Rhodesian SAS Combat Manual

18. Place the victim on his back immediately.
 - a. Clear throat of water, mucus, any obstruction.
 - b. Tilt head back to open air passage.
 - c. Lift jaw up to keep tongue out of air passage.
 - d. Pinch nostrils (or lips) to prevent air leakage when you blow.
 - e. Blow until you see his chest rise.
 - f. Listen for snorting and gurgling - these are signs of throat obstruction.
 - g. Repeat 10-20 times a minute.
 - h. Continue until victim breathes for himself. (see Annex "B").

Section 4 - Snake Bites

19. Look at the bite:
 - a. Multiple small punctures are non-poisonous.
 - b. Two fang marks are due to a poisonous snake.
20. Treatment. Apply a tourniquet to stop the flow of blood in the vein. Incise the punctures and swollen areas to a depth of one quarter inch to get free bleeding. Suck out the venom. Spit it out. Apply a dressing. If available, use a snake bite kit and act as follows:
 - a. Apply a tourniquet when the site of the bite permits.
 - b. Disinfect the skin.
 - c. Make incisions through the fang marks.
 - d. Inject the contents of one ampule under disinfected skin at the site of the bite.
 - e. Disinfect skin and inject the contents of another ampule under the skin or into a muscle at any suitable point on the body.
 - f. Apply suction.
 - g. Keep the patient warm.
 - h. Avoid unnecessary movement.

Section 5 - Health and Hygiene

21. The health and well being of troops are the responsibility of their commander and his interests in their welfare will be reflected in their state of efficiency. He may call on the medical officer for advice at any time, and should do so for planning purposes in the initial stages of any operation.
22. Health and efficiency in hot climates. The importance of health in hot climates cannot be overemphasised. If it is neglected, operational efficiency could well be materially affected. The subject is covered in Annex "C" to this chapter.
23. Malaria occurs in some areas of Rhodesia and in countries adjoining. Daraprim (Pyrimethamine)

is the Army's malaria prophylactic. Its dosage is one tablet at weekly intervals. Commanders are to ensure units always have adequate supplies and that it is administered under supervision.

24. Personal protection measures - long sleeves, slacks, mosquito nets, anti-mosquito cream - are to be initiated as necessary and rigidly enforced.

25. When siting camps, bivouacs, etc., consideration is to be given to malaria hazards presented by swamps, marshes or other standing water and African habitations.

Preventative Inoculations: TAB and Smallpox

26. All units are to be protected by TAB inoculations and smallpox vaccinations. On call up, where evidence to the contrary not available, susceptible personnel are to receive TAB injections and smallpox vaccination. This may reduce their efficiency for 2-3 days.

Dysentery, Diarrhoea and Other Fly-Borne Disease

27. Camp cleanliness is essential to prevent the breeding of flies and consequent fly-borne infections.
 - a. Latrines. Must be sited away from water supplies and whatever their type must be flyproofed. "Shallow trench latrines" where excreta must be immediately covered with earth, can only be used for up to three days and the fouled area must be plainly indicated.
 - b. Food. Must be protected from dust and flies during carriage, preparation, cooking and serving. The cleanliness of food handlers and cooking sites is of prime importance and they should receive priority when water supplies are limited. The use of butter muslin or mosquito nets for food covering is recommended.
 - c. Refuse disposal. Refuse must not be allowed to accumulate; it must be burned or buried daily.

28. Water Supplies. Water from any source must be considered contaminated until the reverse is proved, by reference to medical or civil health authorities. Until such assurance is obtained, all drinking water will be purified by boiling. Chlorination in unit water trailers or by individual water sterilizing outfits. A teaspoon of Dettol or similar disinfectant added to a bucket of water and allowed to stand for 30 minutes will make water safe for ablution purposes. This also aids the rapid healing of cuts and scratches sustained during bush

The Rhodesian SAS Combat Manual

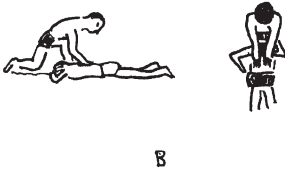
operations. Water sources must be considered a Vital Point and suitably guarded against human contamination or deliberate poisoning. See Annex "D" concerning notes on treatment of water.

Annex "A" to First Aid

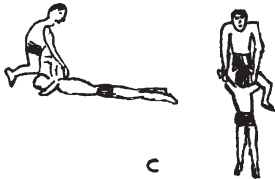
Artificial Respiration (Holger Nielsen)



The correct starting position (note the position of the rescuer's knee, foot and hands)



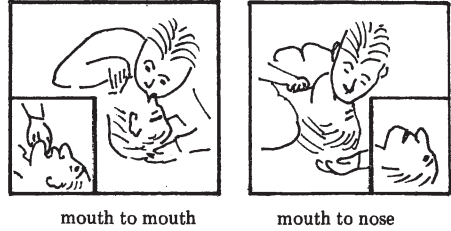
"One, two and three" - Expiration



"Five, six and seven" - Inspiration

Annex "B" to First Aid

Artificial Respiration (Mouth to mouth)



The Rhodesian SAS Combat Manual

Annex "C" to First Aid

Health and Efficiency in Hot Climates

Introduction

1. The following notes on acclimatisation and heat casualties are issued for the information and guidance of all commanders.

2. A better understanding of cause and effect and intelligent application of basic principles in training can avoid unnecessary casualties and produce troops who can fight efficiently in the most severe conditions.

3. Maximum use should be made of advice from medical officers when planning training, and talks should be given so that troops themselves understand limitations, requirements and consequences.

Acclimatisation

4. The human body does not function efficiently unless its temperature is maintained between the approximate limits of 98 and 101 degrees F. The maintenance of health and efficiency depends on the body's ability to get rid of the heat produced and built up by muscular action so that the body temperature can remain between the above mentioned limits.

5. In temperate or cool weather where the surrounding air is appreciably cooler than normal body temperature, the body cools down fairly rapidly owing to radiation, convection and conduction. In hot weather, on the other hand, the body cannot dispose of accumulated heat without sweating. Sweat evaporates, taking with it much heat from the body.

6. If a person is moved to a hot climate from a cool or temperate climate (or even from a hot area where he was physically inactive or reasonably well protected from heat indoors), he is inclined to sweat more than is really necessary at the slightest exertion. The body gradually adjusts itself to the new circumstances and the loss of water through sweat becomes relatively smaller and constant. This process of adjustment is acclimatisation.

7. Acclimatisation does not take long. A person newly arriving in a hot area should not overtax himself physically. That does not mean that he should be subjected to no physical exertion

whatever. The programme of training and work should, particularly at the outset, be so arranged, in consultation with a medical officer, that its physically demanding portion will take place in the cooler parts of the day. In addition, provision must be made for short rest breaks of about five minutes to follow on one another much more frequently than the duration of the usual instructional period, which may actually be adjusted accordingly. Members must be afforded the opportunity of drinking water during the rest breaks. In the first week it may be necessary to repeat the rest breaks during a period far more frequently than during the second and third weeks. As the participants in the training gradually become fitter in the course of the training period extending over weeks, so the number of rest breaks may be reduced in easy stages.

8. After the passage of three weeks in which a member has undergone such a graded training process, his body will normally have adjusted itself to the new circumstances and he may then, as a general rule, be considered acclimatised. After that he should be capable of continuing his normal work or training without danger. However, in the beginning it remains desirable to:

- a. Restrict physically exacting training to the cooler hours.
- b. Make provision for the regular intake of water.
- c. Make arrangements for regular rest breaks.

9. In addition, officers and instructors must continuously, during and after the process of acclimatisation, remain on the alert for symptoms of over fatigue, difficulty in breathing or other distress in individuals while subjected to physical exertion in work or training.

Physiological Factors Affecting the Preservation of Heat Casualties

10. The fluid balance of the body.

a. Sweat consists mainly of water. When sweating a person loses water from his body. The loss must be made good by taking in an equal amount of fluid. The balance between sweat (loss) and drinking (intake) is known as the fluid balance of the body.

b. If a person loses more water by sweating than he makes up by drinking, he will gradually stop sweating. If a person stops sweating in very hot weather he cannot get rid of built up heat. His body temperature may then rise to a dangerous height with the result that he becomes seriously ill

The Rhodesian SAS Combat Manual

and may even die.

c. In very hot dry weather a person loses more than a gallon of water through sweat while doing a normal day's work. To balance that loss and maintain health and efficiency, he must take in at least 12 pints of fluid daily. A daily loss through sweat of two gallons is not uncommon in the dry heat of desert areas and during very hard work in any hot climate as much as three gallons may be lost in sweat. This loss must be made good.

d. Although a soldier may, by good training, be taught to use a limited supply of water to best advantage, he cannot work efficiently for any length of time while taking in a lesser quantity of fluid than that which his body really needs. If water is temporarily in short supply and has to be rationed, sufficient supplies must sooner or later be provided and members encouraged to drink it. An injudicious reduction of fluid intake in hot weather may, in addition to the loss of efficiency (particularly in recruits and unacclimatised troops), also give rise to heat casualties. It is impossible to train a human being to do, for any length of time, with less water than his body needs.

e. Thirst is not an adequate guide to the body's state of fluid balance. The body normally requires more fluid than is necessary merely to slake thirst. The best indication is the amount of urine passed. The passage of a pint or more in every 24 hours indicates a satisfactory fluid balance.

11. The Salt Balance of the Body

a. Sweat contains salt. When a person sweats a lot he consequently loses a lot of salt from his body. Salt is a vital constituent of nearly all parts of the body, particularly of the blood and muscles. If a person loses too much salt from his body he becomes ill and inefficient. Loss of salt through sweat must therefore be made good by taking in salt in food and drink.

b. The normal food ration contains enough salt to make good the amount of salt lost daily in a gallon and a half of sweat. In hot weather troops working hard may lose more salt and special measures must be taken on medical advice to maintain the salt balance. Salt tablets may, for instance, be taken or two teaspoons of salt may be added to every gallon of drinking water without spoiling the taste.

12. Food.

a. Heat, with its attendant listlessness, lessens the appetite so that troops may take in insufficient food for their daily needs. When the appetite is poor, one is inclined to be choosy and satisfy hunger with light tidbits which lack the elements

required for the maintenance of health and fitness.

b. Breakfast is indispensable, especially for someone who has to do parade work or other tiring work in the forenoon. The sugar in the blood of a person who has not breakfasted will, by 1000 hours or 1100 hours, have been reduced to the extent that he is exposed to collapse as a result of fatigue.

c. A heavy meal in the heat of the day is undesirable because the appetite is poor at that time and because it is difficult to do fatiguing physical work or training on a full stomach in the heat or even keep awake during a film or lecture. The main meal of the day should be taken in the evening.

13. Clothing. Apart from other considerations, men must wear clothes to prevent sunburn, to protect the body in close country and to ward off insects (particularly mosquitos). In hot weather, clothing hampers the body's cooling processes. During training it is often necessary, even in excessively hot weather, to wear protective clothing (like overalls) and close fitting equipment. That cannot be avoided but everyone concerned must consider this factor in planning and supervising training.

14. Rest and sleep. In hot weather the tempo of all physical functions increases. Where the body is further heated by exercise in hot weather, the tempo becomes even higher. In hot weather, therefore, one tires and becomes exhausted far sooner than in cool or temperate surroundings. Not only do the muscles gradually become less efficient, but the brain is affected in the same manner. Rest and sleep reduce that tempo and enable the body and the brain to recover. Where one has to do with less than the normal rest and sleep, exhaustion will occur all the sooner in hot weather. These factors demand special consideration where training on a hot day follows night training or duty.

15. Sunburn and less serious ailments. Colds and other less serious ailments, including sunburn, raise the body temperature. A person in that condition is not necessarily out of action. If, however, he is subjected to physical exertion, he starts with an abnormally high body temperature. Consequently his temperature rises faster than usual and he becomes exhausted and reaches the danger mark much sooner.

16. Summary. The following factors require constant attention in the prevention of heat casualties:

a. Proper acclimatisation and strict observance during that process to the requirements outlined in paragraphs 4 to 8 above.

The Rhodesian SAS Combat Manual

- b. Adequate intake of fluids (1½ to 3 gallons/day)
- c. Adequate intake of salt.
- d. Food intake.
- e. Clothing and equipment.
- f. Adequate rest and sleep.
- g. Conditions which increase body temperature.

Nature of Heat Casualties

17. Besides those arising from sunburn, heat casualties are usually caused by either heat stroke or heat exhaustion.

18. Heat stroke.

- a. Heat stroke occurs when the heat regulating mechanism of the body breaks down.
- b. An important factor is lack of water. If an individual is sweating profusely and is not drinking enough water to make good the loss, he will eventually stop sweating. His skin will become dry and consequently he will be unable to dispose of built-up body heat. His temperature will rise dangerously. When the body temperature reaches 107 degrees, the brain and nervous tissues become damaged. If body temperature remains too high for too long (three hours or longer), death is likely.
- c. Other factors contributing to heat stroke are:
 - (1) Inadequate acclimatisation;
 - (2) general physical indisposition (colds, influenza, sunburn or more serious ailments);
 - (3) overindulgence in alcohol;
 - (4) unsuitable clothing;
 - (5) physical exhaustion;

- (6) constipation.

19. Heat Exhaustion.

- a. Heat exhaustion arises mainly from a lack of salt or water or both and occurs where the person concerned loses more salt in sweat than he takes in food and drink.
- b. The body temperature does not become raised and, as a rule, the individual does not stop sweating although he does become tired and weak and may faint or become excessively listless and inefficient. Severe muscular cramp may occur. The latter is a symptom of lack of salt. Severe cases of heat exhaustion can end in death.
- c. The other contributory factors are those found listed under "Heat Stroke" above.

20. Prevention. Heat stroke and exhaustion may be prevented by the intelligent and practical observance of the factors mentioned in paragraph 16 above.

21. First Aid.

- a. Where a member shows symptoms of overtiring or distress during training, he will immediately be ordered to fall out and, if possible, be brought into the shade and his clothing and equipment loosened. If conscious, he should drink water in small amounts repeatedly.
- b. Where a member shows the symptoms of heat stroke or heat exhaustion, medical attention must be obtained as soon as possible.

The Rhodesian SAS Combat Manual

Annex "D" to First Aid

Treatment of Water

1. All water intended for human consumption must be considered polluted and requiring purification before it is fit to drink. Safe drinking water has the following qualities:

a. Freedom from poisons. This is determined by laboratory analysis or, in the field, by tests carried out by the medical officer using a small portable test kit (Case, Water Testing, Poisons).

b. Freedom from suspended matter. Although suspended matter such as dust, mud, clay, etc. is not in itself a disease producing agent, it may cause the water to be unpleasant in appearance and taste and have an irritating action on the lining of the stomach and intestines. Of more importance is the fact that the majority of disease germs found in water are contained in the suspended matter.

c. Freedom from disease germs. It is the pollution of water by disease germs that makes it necessary to regard all water as unfit until purified.

2. Quantity of water. The quantity of water needed to maintain health varies with conditions of climate and service but, in general, the minimum requirement is five gallons for each man, per day, for all purposes. Of this quantity, one gallon is necessary for drinking and cooking purposes. In very hot climates the daily requirement for drinking may be as much as two or even three gallons for each man per day.

3. Sources of water. Although all water must be considered unsafe to drink unless purified, the selection of a good source of supply together with adequate supervision and protection of that source makes the task of purification easier. The sources of supply available in nature are as follows:

a. Rain water. This is normally used in emergency only, for a limited supply to a small number of people. The degree of contamination varies with the cleanliness of the collecting surface. A roof infested with rats will produce water which is more polluted than one from a surface free of animals.

b. Surface water. This is water from rivers, streams, lakes and ponds. Such water is normally grossly polluted from the ground surface over which it has come. When surface water is utilised as a source of drinking water, the following protective measures should be taken in addition to the normal routine of purification:

- (1) the site must be signposted;
- (2) guards and patrols must be established;

(3) the overflow from storage tanks and vehicles must be diverted by a surface drain running between them and the source of supply;

(4) the banks of the stream or river must be inspected for at least two miles upstream for gross contamination. Gross contamination may indicate sewage disposal from villages, etc.:

c. Surface waters are usually of better quality when collected away from the bank where the water is moving. Aeration by movement over rocks and stones as well as exposure to sunlight, exercise a degree of natural sterilising effect.

d. Subsoil water. Normally, subsoil water is just as badly polluted as surface water. It is tapped by shallow wells and springs which draw water from above the first impervious stratum of the earth.

e. Deep underground water. This is obtained from deep wells and springs which extend below the first impervious stratum of the earth's crust. They represent the purest source of drinking water for two reasons, firstly because the water has filtered a long way through the earth and secondly because the impervious stratum protects against contamination from above.

f. In many sand bottom dry river beds, water may be found by digging a three or four foot sump in the bed, and any water found may be baled out with a mess tin until the supply is clear.

Purification of Water

4. Purification of water is carried out in two stages:

a. Clarification. This is normally done by filtration. In the case of Engineer or unit water trailers, proper water filters are used. These are fitted to and remain an integral part of the trailer.

b. Sterilization. This process kills all disease germs remaining after clarification. It is achieved by various methods:

1. For large quantities of water

(a) By means of the addition of HTH (High Titre Hypochlorite) followed after 30 minutes by Detasting Crystals (Sodium Theosulphate). To each 100 gallons of clarified water, $\frac{1}{4}$ of a 60 grain metal scoop (from Cases Water Testing Neutral Red) and one level plastic spoon (from pack of HTH) is mixed to a paste in a cup, filled to the brim with clarified water and poured evenly into the water to be treated.

(b) Thirty minutes later, surplus chlorine is neutralised by the addition (to each 100 gallons of treated water) of similar amounts in scoops, as above, of Detasting Crystals dissolved in a cup and evenly distributed in the water to be neutralised.

2. For small quantities of water (if filtered water is

The Rhodesian SAS Combat Manual

not available, use the cleanest water possible.).

(a) Boiling for not less than five minutes.

(b) Halazone tablets - Add two tablets to a water-bottle, shake vigorously. Wait 30 minutes before drinking.

5. If Halazone tablets are not available and facilities for boiling do not exist, the following method can be used with the "Case, Water Testing, Neutral Red" and packs of "HTH" and Detasting Crystals.

a. Water bottles

(1) Required are two water bottles, one marked "sterilizing" and the other "taste remover"; Tin of HTH containing a plastic spoon; Tin of Detasting Crystals; Case, Water Testing, Neutral Red.

(2) Method

(a) Measure half metal scoop or level plastic spoonful of HTH into the water bottle marked

remover". Fill to the neck with treated water and shake to dissolve the crystals. One half scoopful or one plastic spoonful of this solution (added after the 30 minutes) to the treated water bottle will neutralise the chlorine taste.

b. Jerricans (3½ gallons)

(1) Required - as for water bottles.

(2) Method. As above, except that four times the strength of solution of HTH from the water bottle marked "sterilizing" are added to each gallon in the container and (after 30 minutes), four times the strength of solution from the water bottle marked "taste remover" per gallon are required to remove the taste.

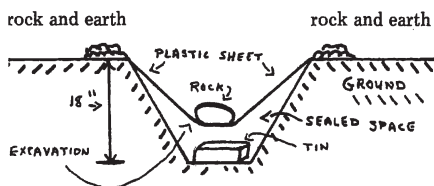
6. Taste remover crystals destroy the chlorine in HTH. If they are mixed together before use, or if taste remover is used first, there will be no chlorine

The Rhodesian SAS Combat Manual

Annex "E" to First Aid

Distillation and Collection of Water in Arid Areas By Means of a Plastic Sheet

1. A "survival still" consists of a 6 foot square of clear plastic sheeting (such as used for covering tobacco seedbeds, etc.) and a mess tin, water bottle or other container to catch the distilled water. A hole should be dug in an unshaded spot, preferably a natural depression or dry river bed. The hole should be round and about 3 feet across. Slope the hole inwards and place the container on the bottom, allowing room for the plastic sheet to be laid over the top, weighted down at the edges and with a stone on its top centre sufficient to form a cone about 18 inches from the top of the water container.
2. Condensation will occur and drops of water form on the underside of the plastic sheet, run down and drip from the bottom of the cone into the container.
3. Water acquired by distillation does not need sterilization before use.
4. It should be noted that, as a general rule, this system provides only sufficient water for a man to survive and will not be enough for him to remain fully operational.



Annex "F" to First Aid

Detection of Poisoned Water in the Field

1. Water containing lethal doses of arsenic or cyanide will be extremely alkaline. There are few, if any, natural Rhodesian water sources with this property. A simple test for excessive alkalinity will therefore also serve as a test for poisoned water with apparatus small enough to be carried in the pocket.
2. The reagent PHENOLPHTHALEIN (in rectified spirit 1%) shows a Pink or Red reaction to excessive alkalinity. If a few drops of this reagent added to a small quantity of water to be tested shows this reaction, it can be assumed that the water has been contaminated and an alternative supply is needed. If no pink, or a very faint pink reaction is seen, 5 drops of 1/10 N Silver Nitrate should be added to a fresh sample and the whole shaken. A pale Yellowish or Reddish Brown colour or precipitate will indicate the presence of arsenic and another supply must be found. A pearly white colour or precipitate can be ignored.
3. Water showing negative reactions to the above still requires normal sterilization before use.
4. Reagents, plastic drop bottles and plastic bag containers are obtainable from Army Medical Equipment Section on demand.